PDA Baseline Position
(Key considerations for the PDA)
@June 27, 2018

The following is IREQ's (updated by management) list of the key issues addressed in the PDA:

1. The PDA is an agreement (the "Agreement") between the Toronto Waterfront Revitalization Corporation ("TWRC") and Sidewalk Labs ("SWL"), a wholly-owned subsidiary of Alphabet Inc. Individually, TWRC or SWL is a "Party", and together are "Parties". Sidewalk Toronto Limited Partnership is a funding arm, and not a party to the PDA.

2. The principal objective of the Agreement is to establish a roadmap for the design and preparation of the Master Innovation Development Plan (MIDP). At the same time, TWRC and SWL will work to develop principal commercial terms of the Principal Implementation Agreements (the Land, Infrastructure, Intellectual Property Methodologies) which would be finalized subject to and upon receipt of approvals necessary to proceed.

3. The Land Methodology will be based on fair market value of Quayside as determined by an Appraisal Institute qualified appraiser in accordance with principles to be agreed in the MIDP.

4. The program set out in the MIDP, if implemented, may ultimately impact the fair market value of Quayside.

5. The MIDP will be a collaborative research exercise (within a structured framework of collaborative principles, timelines, procurement policies, consultation with relevant stakeholders, detailed budgets, etc.) to establish the feasibility and viability of a

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smart city, public/private partnership initiative initially on the Quayside Lands and will also address plans at scale for the Eastern Waterfront lands.

6. The "drop dead" date for the completion of the MIDP is September 30, 2019 and for the Principal Implementation Agreements is December 31, 2019 subject to extensions by mutual consent of the Parties.

7. The Agreement does **NOT** and the MIDP will **NOT** create a real estate interest or result in the transfer of ownership in any lands, including the Quayside Lands, to SWL or any person.

8. The Agreement commits SWL to provide two tranches of funding (the "Funding"):

   - Up to US$10 million to fund joint activities of the Parties to the execution date of the Agreement; and
   - Up to an additional US$40 million to fund the preparation and finalization of the MIDP (subject to an overall cap of US$50 million).

   Alphabet Inc. will provide a letter of support for the Funding.

9. The Agreement does **NOT** provide, as a condition of the Funding, for any right to equity in (i) the Quayside Lands, (ii) any future lands, (iii) a public/private partnership between Parties or (iv) any other business arrangement between the Parties or any entity affiliated with SWL or Alphabet Inc.

10. SWL will fund reports and studies with the Funding within budget parameters agreed to by the Parties. SWL will provide updates to the Project Management Committee.

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11. The Agreement can be terminated, without cost, by either Party, in accordance with a dispute mechanism protocol which fast tracks the termination within 90 - 120 days of commencement of the dispute resolution process by a written notice to terminate by either Party if mediation is unsuccessful.

12. The Agreement provides for indemnity and release provisions to each Party which would be considered standard and reasonable for agreements of this nature and for exclusion of consequential damages.

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Toronto Waterfront Revitalization Initiative

TOPIC

The Government of Canada's role in the Toronto Waterfront Revitalization Initiative (TWRI).

KEY MESSAGES

- The Government of Canada has partnered with the City of Toronto and the Province of Ontario to invest $1.25 billion in the second phase of revitalizing Toronto's eastern waterfront. Waterfront Toronto is leading the implementation of the initiative.

- As a smart community, the Quayside proposal under development by Sidewalk Labs and Waterfront Toronto has the potential to promote innovative and advanced urban planning, producing better outcomes for the communities.

- Quayside also represents an opportunity to balance innovation and investment attraction with the protections that Canadians expect.

- Public trust, community engagement and due process is key to achieving these outcomes.

- The Quayside proposal will be subject to extensive scrutiny and approvals.

- Since 2016, the Government of Canada has announced $416 million in contribution funding towards remediating and flood protecting Toronto's Port Lands. This work is expected to increase the resiliency of nearby communities and their capacity to adapt to the impacts of climate change.

If pressed on Sidewalk Labs:

- The federal government is not a party to Waterfront Toronto's agreement with Sidewalk Labs.

- Infrastructure Canada is monitoring data and privacy issues related to Waterfront Toronto and the Quayside project and is mindful of the national conversations on these issues and possible higher level approaches being considered by the Government of Canada.

- On July 31, 2018 Waterfront Toronto and Sidewalk Labs signed an agreement that provides a roadmap to ultimately complete the proposed Development Plan for Quayside by the end of September 2019, at which time Waterfront's Board of Directors will consider the Plan for adoption.

- Both Waterfront and Sidewalk continue to be committed to ongoing public engagement on key issues as the Plan develops, which will inform a public consultation draft that is expected in the early spring.

If pressed on the Ontario Auditor General Report

- The Government of Canada thanks the Office of the Auditor General of Ontario for its thorough examination of the Waterfront Toronto Revitalization Corporation.

- The Government of Canada will review the Ontario Auditor General's recommendations to ensure that government partners continue to effectively manage infrastructure investments that contribute to building a more prosperous, secure and inclusive Canada.

- The Government of Canada supports Waterfront Toronto and its vision to develop sustainable communities, increase the supply of affordable housing, expand public transit and increase economic competitiveness.

BACKGROUND

Waterfront Toronto, a not-for-profit corporation, was established in 2001 under the *Toronto Waterfront Revitalization Corporation Act* to oversee and lead the renewal of the city's waterfront. It is mandated to deliver a revitalized waterfront that brings together the most innovative approaches to sustainable urban development, excellence in urban design, real estate development, and leading technology infrastructure.

The Deputy Minister of Infrastructure and Communities is in the middle of a one-year term as Chair of the TWRI Inter-Governmental Steering Committee (IGSC), a senior officials-led information sharing and coordinating body among the three orders of government and Waterfront Toronto.

On June 28, 2017, the three orders of government announced joint funding of $1.25 billion for the Port Lands Flood Protection and Enabling Infrastructure Project (PLFP), which is expected to take place over a seven year period (2018-2025). The PLFP will unlock 880 acres of waterfront land for future growth and development by

providing critical flood protection to southeastern portions of downtown Toronto, and converting the area from underutilized, industrialized lands into accessible public and green spaces. The work will also see upgrades made to critical infrastructure including roads, bridges, and water systems. Part of the scope includes work on the Cherry Street Stormwater and Lakefilling Project which will create the required land base for the larger flood protection plan by lakefilling around an area known as Essroc Quay. On November 28th the federal Minister of Infrastructure and Communities and the Mayor of Toronto participated in an official "groundbreaking" ceremony for Port Lands, marking the start of several years of extensive work.

On October 16, 2017, Waterfront Toronto's Board of Directors endorsed the selection of Alphabet subsidiary, Sidewalk Labs, as the preferred proponent to move forward as the Innovation and Funding Partner for the Quayside Project, which will create a new community that will serve as the pilot project to test the vision and desired outcomes for the eastern waterfront. This would encompass a mixed-use of 'smart' community concepts, innovative building techniques and connectivity to build a climate positive city "from the Internet up". Sidewalk is currently developing the proposed Master Innovation and Development Plan (MIDP) for Quayside. A public consultation draft of the Plan is estimated to be released in April 2019, with a final version to be submitted for the Waterfront Toronto Board of Directors' consideration for adoption in September 2019.

The federal government is not a party to Waterfront Toronto's agreement with Sidewalk Labs. The federal interest in Waterfront Toronto's engagement with Sidewalk Labs is to monitor and understand how activities may inform broader Government of Canada policy development on data ownership/control, privacy and ethics, which are issues of heightened public sensitivity.

The Ontario Auditor General (OAG) has been conducting a "value-for-money" audit of Waterfront Toronto over the last ten months. The OAG's report is expected to be released in early December. Waterfront Toronto will coordinate with INFC as well as the Ontario Ministry of Infrastructure and City of Toronto on the communications response to the report.

FUNDING

The tri-government PLFP Project Contribution Agreement came into effect on May 1, 2018. The federal funding contribution amounts to $416 million towards flood protecting Toronto's Port Lands, which includes $32.5 million for the Cherry Street Stormwater and Lakefilling Project that is funded separately under the Clean Water and Wastewater Fund (CWWF).

Waterfront Toronto

On July 31, 2018 the Waterfront Toronto (WT) Board of Directors is expected to approve the Quayside Partnership Development Agreement (PDA) with Sidewalk Labs, providing a work plan to complete the Master Innovation and Development Plan (MIDP) for this project by fall 2019.

The governments of Canada, Ontario and Toronto are contributing funding equally in a total amount of $1.25 billion to WT towards flood protecting of the Port Lands (the PLFP project). The project is expected to take place over a seven year period (2018-2025).

Context

WT has partnered with Sidewalk Labs – a subsidiary of Google parent-company Alphabet. The partnership aims to use a 12-acre "Quayside" section of Toronto's eastern waterfront to develop world-leading design and technologies to create the city of tomorrow. This would encompass a mixed-use of 'smart' community concepts, innovative building techniques, connectivity and a climate positive approach to city building**.** Following a Request for Proposal for an innovation and funding partner, WT entered into a Framework Agreement in October 2017 with Sidewalk Toronto - an affiliate of Sidewalk Labs. The Framework Agreement set out the basic terms and principles for the MIDP.

WT and Sidewalk Labs have worked toward a Partnership Development Agreement (PDA). This is a public document that provides a work plan to ultimately complete the MIDP by September 2019. The WT Board of Directors is expected to approve the PDA on July 31, 2018. The PDA will replace the Framework Agreement.

The PDA commits Sidewalk Labs to a direct funding commitment of $50 million toward fully developing the MIDP, and to moving Google Canada's headquarters to the waterfront area as an anchor for the urban innovation cluster. The PDA also contains a number of principles around IP, data governance and privacy, public engagement and communications, and government relations – which are intended to address public concerns in these areas.

The PDA is clear that Sidewalk Labs does not have any rights to the land. It will however be permitted to work with WT on the vision/planning of the Eastern waterfront. Land valuation and disposition methodology will be negotiated over the course of the MIDP's development.

The federal government is not a funding partner in the Quayside project. Its interest in WT's engagement with Sidewalk Labs is to understand how its activities will inform Government of Canada policy development on data ownership/control, privacy and ethics. INFC acts as a portal for linking to the broader federal community on policy questions and other issues.

The Quayside project is viewed as a long-term project that would likely extend beyond WT's 25-year mandate which expires in 2028. [redacted]

In June 2017, the federal government announced a funding contribution of $416 million towards flood protecting Toronto's Port Lands. This includes $32.5 million for the Cherry Street Stormwater and Lakewater project (Cherry Street) funded separately under the Clean

Water and Wastewater Fund (CWWF). The PLFP Project Contribution Agreement (PLFP CA) came into effect on May 1, 2018.

The PLFP project is expected to unlock 880 acres of waterfront land for future growth and development by providing critical flood protection to southeastern portions of downtown Toronto, and converting the area from underutilized, industrialized lands into accessible public and green spaces. The work will also see upgrades made to critical infrastructure including roads, bridges, and water systems. Part of the scope includes work on the Cherry Street project which will create the required land base for the larger flood protection plan by lake filling around Essroc Quay.

Work on the PLFP Project is progressing on schedule and WT has commenced site mobilization. The Cherry Street project is also progressing on schedule, with barges currently delivering core stone fill onsite. Work on Cherry Street is at 40% complete with substantial completion expected in June 2019.

The Quayside and PLFP Projects are led by Waterfront Toronto (WT) – a non-profit entity established in provincial legislation in 2001 and funded by the federal, provincial and municipal governments. The three orders of government each appoint four of its twelve Board members, who serve three-year renewable terms. A senior officials-level intergovernmental steering committee (IGSC) coordinates information-sharing among the three levels of government and WT.

Risks and Mitigations

Citizen concerns have arisen around privacy and data in a smart cities context. In June 2018, WT formed an arms-length Digital Strategy Advisory Panel to provide guidance on how best to incorporate data privacy, digital systems, and the safe and ethical use of new technologies in the next phase of waterfront revitalization. INFC has been monitoring data and privacy issues related to WT and the Quayside project– mindful of the national conversations on these issues and possible higher level approaches being considered by the Government of Canada, including the national data and digital transformation consultations taking place over the summer.

Next Steps

- **July 31, 2018** Waterfront Toronto Board of Directors to approve and release the Quayside PDA
- **August 10, 2018** Ministerial visit to WT
- **September 6, 2018** meeting of the IGSC
- **January 2019** meeting of the IGSC
- **April 2019** public consultation draft of the Quayside MIDP
- **September 2019** expected finalization of the Quayside MIDP

For immediate release
November 29, 2018

SIDEWALK LABS REVEALS PRECEDENT SETTING PROPOSAL FOR A NEW NEIGHBOURHOOD AT QUAYSIDE

Includes 40% below-market housing and 9,000+ construction jobs

TORONTO — Sidewalk Labs revealed today a proposal for a new neighbourhood at Quayside that will improve the quality of life for Torontonians and set a new standard for urban living. The plan combines the latest in urban design and emerging technology to achieve unprecedented affordability and economic growth. Quayside will have 40% below-market housing, create 9,000 new jobs in construction and house 3,900 jobs upon completion.

"We know how important the revitalization of Quayside is for the city and everyone who lives here. Torontonians want more affordable housing, faster ways to get around the city, safer streets for pedestrians and cyclists, a cleaner and healthier environment. That's what we are aiming to do by creating this new neighbourhood," said Jesse Shapins, Director of Public Realm "This draft site plan released today demonstrates what we are envisioning for Quayside and how we aim to address these critical challenges facing Toronto."

Key features of the plan include:

- 40% below-market housing at Quayside, including 20% affordable housing and 20% middle-income housing.
- Upwards of 9,000+ direct and indirect jobs will be created in Ontario as a result of the building construction at Quayside.
- Approximately 3,900 jobs will be located at Quayside upon completion, with a mix of office, retail, production and community.
- All of the buildings at Quayside will be made of mass-timber. This will energize the Canadian timber industry placing the country in a world leading position in design, fabrication and construction. This will be the greatest concentration of mass timber buildings in the world.
- A 75-85% reduction in greenhouse gas emissions compared to today's standard developments.
- New ways to get around including the planned LRT, a safer Vision Zero neighbourhood, and flexible streets that prepares for an automated vehicle future.
- Extraordinary public and green spaces and waterfront access that will be accessible for everyone.
- A proposed, independent, Civic Data Trust for all "urban data". No one has a right to own information collected from Quayside including Sidewalk Labs.

The Site Plan released today will be presented to the public at the 4th Public Roundtable, taking place on Saturday, December 8th. Public feedback will be incorporated into a detailed Master Innovation and Development Plan to guide future work at Quayside, which is expected to be released in early 2019. It will be reviewed by Waterfront Toronto and all three

levels of government and undergo public consultations led by both Waterfront Toronto and the City of Toronto.

Sidewalk Labs
Sidewalk Labs aims to combine world-class urban design with cutting-edge technology to set new standards of sustainability, affordability, and economic opportunity for people of all incomes abilities and ages.

Sidewalk Toronto
Waterfront Toronto has created the objectives and engaged Sidewalk Labs to design a new kind of complete community on Quayside that will serve as a model for sustainable and resilient neighborhoods throughout Toronto and cities around the world. Sidewalk Toronto also referred to as the Quayside project, has an ambition to address the toughest challenges facing cities — and meaningfully improve quality of life — through the combination of forward-thinking urban design and innovative technology.

– 30 –

For media inquiries:
press@sidewalklabs.com

Table analyzing references to scale and Regulatory Framework in the Quayside PDA and RF

PDA (executed July 30, 2018)	RFP (let March 17, 2017)
Scale	
Key Terms: "MIDP Site" means the Designated Waterfront Area, as further described in Schedule E hereto. "**Quayside Parcel**" means the approximately 12 acres of land identified as the "Quayside Parcel" on Schedule E, inclusive of the water parcel commonly known as Parliament Slip and any developable lands therein created by any roads closed or realigned or by any water parcels being filled. **Schedule B: MIDP Scope:** 1.03 **Planning At Scale** The MIDP will include both plans for the Quayside Parcel and plans at scale, including for the MIDP Site as required by the business analysis. The Parties acknowledge that the plans in the MIDP may explore lands not owned or controlled by the Parties. Any proposed options at scale shall be subject to and closely tied to the achievement of the MIDP Targets and supported by robust business planning and financial analysis, taking into account the Parties' shared programmatic goals and the MIDP Targets, matters of financing and capital formation, anticipated absorption and economic impact, including estimates for job and economic growth, and through the development of business plans and financial models subject to various assumptions (including with respect to potential revenue streams and estimated costs, including of land) and showing various sensitivities and comparisons (including comparing to a baseline "market" / traditional developer scenario). To the extent these analyses demonstrate the need for scale the Parties will incorporate into the MIDP a set of proposed phases and sequencing to achieve such scale and, subject to obtaining necessary approvals, implement such MIDP. Any implementation of the MIDP will be subject to Waterfront Toronto Approval and Sidewalk Approval, as well as various other conditions, including the receipt of any necessary governmental approvals and clearances and the receipt of any necessary approvals, agreements or consents with landowners or the other third parties. The extent to and the manner in which successful solutions, processes and partnerships are carried forward into subsequent developments could be affected by requirements of the City of Toronto or other authorities or Waterfront Toronto becoming subject after the Effective Date to applicable procurement Laws.	**Part I: Overview of the Opportunity:** ...The Toronto Waterfront Revitalization Corporation ("Waterfront Toronto") is seeking an Innovation and Funding Partner ("the Partner") that shares our aspirations and will help create and fund a globally-significant community that will showcase advanced technologies, building materials, sustainable practices and innovative business models that demonstrate pragmatic solutions toward climate positive urban development. The opportunity in this Request for Proposal ("RFP") is the Quayside Development (the Project), an approximate 4.9-hectare (12-acre) development site situated along Toronto's eastern waterfront (see **Figure 1**) and within walking distance of the vibrant central business district. Comprising sites owned primarily by Waterfront Toronto and the City of Toronto, as well as a privately-held parcel, the Project offers approximately 3.3 million square feet of development potential. The Project is the pilot for which Waterfront Toronto and the Partner will establish a clear vision and action plan for creating a vibrant, climate-positive and prosperous community – one that will serve as a national and global model to encourage market transformation towards climate-positive city building. Waterfront Toronto considers that by achieving key objectives for the Project it may be beneficial to advance the solutions, processes and partnerships proven successful through the Project to subsequent developments on the eastern waterfront, as those lands become available to Waterfront Toronto (as per the established protocols with the City of Toronto). As the directing agency of the waterfront lands, Waterfront Toronto, therefore, reserves the right to do so. The extent to and the manner in which such successful solutions, processes and partnerships are carried forward into subsequent developments of the eastern waterfront could be affected by future applicable procurement policies and additional requirements of the City of Toronto or other funding authorities. [...] The Partner will work directly with Waterfront Toronto in the conceptualization, business planning and implementation stages of the Project (see **Section VII Partner Scope and Deliverables**). This includes identifying and defining the necessary technologies, infrastructure, strategies, measurable outcomes and downstream partners that will ensure the Project's success. **Part VII. Partner Scope & Deliverables:** [...] ...The Project is intended to be a pilot environment for the broader eastern waterfront revitalization. Technologies, approaches and partners that are deemed to be successful in the Project may be integrated as appropriate in future phases as discussed in **Section I.** The co-creation of the guiding vision will inform how Project successes may be scaled elsewhere on the waterfront.
Regulatory Framework	

1.04 Regulatory Framework The Parties acknowledge that the MIDP will address existing applicable laws and the existing policy framework and will note places in which its plans may require revision of, or other approvals under, such existing applicable laws and existing policy framework, in which case the implementation of any such plans will be subject to the relevant Governmental Authorities making or granting such revision or approval. The MIDP will be developed through a process of co-creation and collaboration between the Parties, informed by a robust public engagement process and close collaboration with the City of Toronto and other governmental agencies and stakeholders.	

THE TORONTO WATERFRONT REVITALIZATION INITIATIVE

HOW IS THE GOVERNMENT OF CANADA SUPPORTING THE QUAYSIDE DEVELOPMENT AS PART OF THE TORONTO WATERFRONT REVITALIZATION?

SUGGESTED RESPONSE

- **We support Waterfront Toronto's vision for building advanced and sustainable communities, including through an innovative partnership with Sidewalk Labs.**
- **The Quayside project is an opportunity to balance innovation and investment attraction with the privacy and data protections that Canadians expect.**
- **Broad consultation with the public and government partners will be an important part of any successful plans for the Quayside project.**

Ontario Auditor General Audit of Waterfront Toronto

- **The Government of Canada will review the Ontario Auditor General's recommendations to ensure that our federal investments in Waterfront Toronto continue to be effectively managed.**

INITIATIVE DE REVITALISATION DU SECTEUR RIVERAIN DE TORONTO

COMMENT LE GOUVERNEMENT DU CANADA APPUIE-T-IL LA CONCEPTION DU PROJET QUAYSIDE DANS LE CADRE DE LA REVITALISATION DU SECTEUR RIVERAIN DE TORONTO?

RÉPONSE SUGGÉRÉE

- **Nous appuyons la vision de Waterfront Toronto de bâtir des collectivités durables et avancées, notamment grâce à un partenariat novateur avec la société Sidewalk Labs.**
- **Le projet Quayside est une occasion d'établir un équilibre entre l'innovation et l'attrait pour les investissements, et les mesures de protection de la vie privée et des données auxquelles s'attendent les Canadiens.**
- **Une vaste consultation avec le public et les partenaires gouvernementaux sera un élément important pour le succès de tout plan pour le projet Quayside.**

Vérification du secteur riverain de Toronto par la vérificatrice générale de l'Ontario

- **Le gouvernement du Canada examinera les recommandations de la vérificatrice générale de l'Ontario pour s'assurer que nos investissements fédéraux dans Waterfront Toronto continuent d'être gérés efficacement.**

BACKGROUND INFORMATION

- Waterfront Toronto (WT) was established under provincial legislation as a not-for-profit entity to lead and implement the Toronto Waterfront Revitalization Initiative (TWRI).

- In October 2000, Canada, Ontario, and Toronto announced a contribution commitment of $500 million each to the TWRI, which has supported a series of investments that serve as the first step to transform the waterfront into sustainable new communities and to foster economic growth.

- In addition, Waterfront Toronto and Sidewalk Labs are leading the proposed development of a technology plan to be tested in the 5-acre Quayside district in the East Bay Front. The plan would see the creation of a "smart city" community.

Quayside / Sidewalk Labs

- On October 16, 2017, Waterfront Toronto's Board of Directors endorsed the selection of Alphabet subsidiary Sidewalk Labs as the preferred Innovation and Funding Partner for the Quayside Project.

- Sidewalk and Waterfront are developing a Master Innovation and Development Plan (MIDP) for Quayside that would pilot and test a mixed-use of 'smart' community concepts, innovative building techniques and connectivity to build a climate positive city "from the Internet up".

- The federal government is not a party to Waterfront Toronto's agreement with Sidewalk. The federal interest in Waterfront Toronto's engagement with Sidewalk is to monitor and understand how activities may inform broader government policy and actions, including with respect to infrastructure financing and data governance issues tied to connectivity.

- Waterfront Toronto has formed a Digital Strategy Advisory Panel (DSAP), an arms-length body intended to help guide Waterfront on how best to incorporate data privacy, digital systems, and the safe and ethical use of new technologies in the next phase of waterfront revitalization – issues which have been of primary public concern.

- On October 18, 2018, Sidewalk Labs presented its Digital Governance Proposals to the DSAP, proposing a framework for Quayside that includes:

responsible data use guidelines; civic data trust; a responsible data impact assessment; and open standards.

- Infrastructure Canada is monitoring data and privacy issues related to Waterfront Toronto and the Quayside project and is mindful of the national conversations on these issues as well as possible higher level approaches being considered by the Government of Canada.

- A public consultation draft of the MIDP is estimated to be released in spring 2019. This will be subject to extensive public and tri-government scrutiny before it is submitted to the Waterfront Toronto Board of Directors' for consideration and adoption, possibly in September 2019.

Value-for-Money Audit by the Ontario Auditor General

- The Office of the Auditor General of Ontario recently concluded a value-for-money audit of the Toronto Waterfront Revitalization Corporation (now called Waterfront Toronto), looking into the use of public funds since the inception of the Corporation. The Report was made public on December 5, 2018.

- INFC cooperated with the Auditor General of Ontario's Office to the extent possible, responding to requests for information, factual clearances, and discussions with Infrastructure Canada staff.

- The audit makes ten recommendations, four of which are directed at the Ontario Ministry of Infrastructure "in conjunction with its government partners," and the remainder directed at Waterfront Toronto's management.

- The recommendations focus mostly on making continuous improvements to Waterfront Toronto's project management; improving government oversight of Waterfront Toronto, including setting performance measures for the corporation; and on ensuring that Waterfront Toronto has the necessary authorities to carry-out its mandate.

Contact Persons:

Nancy Faraday-Smith
[redacted]

ADM:
Glenn Campbell
Investment, Partnerships and Innovation Branch

RENSEIGNEMENTS GÉNÉRAUX

- La société Waterfront Toronto (WT) a été créée en vertu de la législation provinciale en tant qu'entité sans but lucratif pour diriger et mettre en œuvre l'Initiative de revitalisation du secteur riverain de Toronto (IRSRT).

- En octobre 2000, le Canada, l'Ontario et Toronto ont annoncé un engagement de contribution de 500 millions de dollars chacun à l'IRSRT. Ces fonds ont permis de réaliser une série d'investissements qui ont jeté les bases d'un projet visant à transformer le secteur riverain en de nouvelles collectivités durables et à stimuler la croissance économique.

- De plus, Waterfront Toronto et Sidewalk Labs dirigent l'élaboration proposée d'un plan technologique qui sera mis à l'essai dans le district Quayside, sur une superficie de 5 acres d'East Bay Front. Ce plan prévoit la création d'une collectivité de type « ville intelligente ».

Quayside/Sidewalk Labs

- Le 16 octobre 2017, le conseil d'administration de Waterfront Toronto a approuvé la sélection de la filiale d'Alphabet, Sidewalk Labs, comme partenaire privilégié en matière d'innovation et de financement pour le projet Quayside.

- Sidewalk et Waterfront sont en train d'élaborer un plan directeur d'innovation et de développement (PDID) pour Quayside qui permettra de créer un projet pilote et de mettre à l'essai une combinaison de concepts liés aux collectivités « intelligentes », à des techniques de construction novatrices, ainsi qu'à la connectivité requise pour créer, grâce à Internet, une collectivité qui aura une incidence positive sur le climat.

- Le gouvernement fédéral n'est pas partie à l'entente entre Waterfront Toronto et Sidewalk. Il ne s'intéresse à l'engagement de Waterfront Toronto à l'égard de Sidewalk que pour observer et comprendre comment les activités peuvent éclairer plus largement les politiques et les mesures gouvernementales, particulièrement en ce qui concerne les questions de financement des infrastructures et de gouvernance des données liées à la connectivité.

- Waterfront Toronto a mis sur pied un groupe consultatif sur la stratégie numérique (Digital Strategy Advisory Panel [DSAP]), un organisme indépendant dont le rôle consiste à guider Waterfront Toronto en ce qui

concerne la meilleure façon d'intégrer la protection des données personnelles, les systèmes numériques, ainsi que l'utilisation sécuritaire et éthique des nouvelles technologies dans la prochaine phase de la revitalisation du secteur riverain. Ces enjeux s'avèrent d'un intérêt primordial pour le public.

- Le 18 octobre 2018, Sidewalk Labs a présenté au DSAP ses propositions sur la gouvernance numérique, proposant un cadre pour le projet Quayside comprenant des lignes directrices sur l'utilisation responsable des données, la confiance des citoyens envers les données, une évaluation responsable de l'impact des données, et des normes ouvertes.

- Infrastructure Canada surveille les questions de protection des données et de la vie privée liées à Waterfront Toronto et au projet Quayside tout en tenant compte des débats nationaux sur ces questions, ainsi que des approches de plus haut niveau possibles envisagées par le gouvernement du Canada.

- Une version préliminaire du PDID devrait être publiée au printemps 2019. Ce projet fera l'objet d'une consultation approfondie, tant par le public que par les trois ordres de gouvernement, avant d'être soumis à des fins d'examen et d'adoption au conseil d'administration de Waterfront Toronto, probablement en septembre 2019.

Vérification de l'optimisation des ressources par la vérificatrice générale de l'Ontario

- Le Bureau de la vérificatrice générale de l'Ontario a récemment terminé une vérification de l'optimisation des ressources de la Société de revitalisation du secteur riverain de Toronto (maintenant connue sous le nom de Waterfront Toronto), et s'est particulièrement penché sur l'usage des fonds publics depuis la création de la Société. Son rapport a été rendu public le 5 décembre 2018.

- INFC a collaboré avec le Bureau de la vérificatrice générale de l'Ontario dans toute la mesure du possible, en répondant à ses demandes de renseignements, en vérifiant les faits et en tenant des discussions avec les spécialistes d'Infrastructure Canada.

- La vérification a abouti à la formulation de dix recommandations, dont quatre s'adressent au ministère de l'Infrastructure de l'Ontario « en collaboration avec ses partenaires gouvernementaux », les autres portant sur la gestion de Waterfront Toronto.

- Les recommandations portent principalement sur l'amélioration continue de la gestion de projet et le renforcement de la surveillance gouvernementale de Waterfront Toronto, notamment en établissant des normes de rendement pour la société et en veillant à ce qu'elle dispose des pouvoirs nécessaires pour s'acquitter de son mandat, plus particulièrement en ce qui concerne le projet Quayside.

Personnes-ressources

Nancy Faraday-Smith
[redacted]

SMA
Glenn Campbell
Investment, Partnerships and Innovation Branch

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TORONTO STAR

Toronto Star.com | News

Waterfront Toronto 'not shying away' from Sidewalk Toronto data privacy questions, senior official says

Donovan Vincent

A senior official with Waterfront Toronto says the corporation has put itself in the "eye of the storm" partnering with Sidewalk Labs to create a controversial "smart city" near the East Bayfront.

Meg Davis, chief development officer for Waterfront Toronto, addressed the controversy Thursday over the collection and control of data and the data infrastructure pertaining to a proposed 12-acre development intended to use technology to improve the lives of its residents.

She was speaking during a panel discussion on smart cities, during the Toronto Region Board of Trade's annual Smart Cities Summit.

Other panel members were John Brodhead, Sidewalk Labs' director of policy and strategy, and Shauna Brail, a senior associate and director in U of T's urban studies program.

The Sidewalk Toronto plan - which hasn't yet been approved - envisions elements such as sensors that could measure things like temperature or air quality. Critics of the project warn it could result in "mass surveillance" and privacy invasions, and there are also calls for the data collected to be controlled by government rather than a large profit-oriented U.S. corporation.

The controversy over the project has led to high-profile resignations from senior levels of Waterfront Toronto and a digital advisory committee set up to guide Waterfront Toronto on the project.

Sidewalk Labs is a sister company of Google.

Waterfront Toronto has been criticized for not taking more of a leadership role when it comes to pushing for data ownership around the proposal.

Brodhead told the audience these matters are still being ironed out and a draft plan addressing data will be made public soon, and that will enable government leaders, the digital advisory committee, Waterfront Toronto and the general public to weigh in with their views.

Davis said Waterfront Toronto is addressing the controversy head on.

"This is really hard stuff. Waterfront Toronto has put itself out there, in the eye of the storm, to say these are conversations (regarding data ownership and privacy) we need to have. These are really important questions. We're not shying away from them," Davis said.

"Waterfront Toronto isn't saying we're the experts. We're bringing experts together so we can hear all the voices," she said.

"Waterfront Toronto is known for public engagement - this has been public engagement on steroids," Davis said, referring to the public input that is happening regarding the Sidewalk Toronto project.

A master plan is set to be released sometime early next year, and it would require approval from Waterfront Toronto, the City of Toronto and perhaps the federal government.

Waterfront Toronto represents the three levels of government.

Brodhead said the engagement of Torontonians on the project has not always been "comfortable" for Sidewalk Labs, but he added that the company views that input as valuable.

"We've been pushed in a lot of very useful directions in terms of quality of life for this city," he told the audience.

Earlier in the day, David Goodis, assistant information and privacy commissioner of Ontario, spoke briefly on the topic of smart

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cities - in Canada and elsewhere.

He said he believes they are useful and is in favour of them, but said there needs to be open and honest discussions about data and technology.

Data and technology must be used for good, and used in legal, ethical and transparent ways, he said.

He went on to say there are tools that can be used in the "de-indentification" of data so that individual privacy is respected and protected.

Strong contracts need to be in place to ensure these goals are upheld when business deals pertaining to data collection and technology are signed, Goodis told the audience.

Donovan Vincent is a housing reporter based in **Toronto**. Follow him on Twitter: @donovanvincent

Photo: Sidewalk Labs has partnered with a government agency known as Waterfront **Toronto** with plans to erect mid-rise apartments, offices, shops and a school on a 12-acre site.

2018 Toronto Star (ON) (web site)

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Standing Committee on Access to Information, Privacy and Ethics
Waterfront Toronto - Opening Remarks
(CHECK AGAINST DELIVERY)

Introductions:

Good afternoon, Bonjour, and thank you for the invitation to speak today. My name is Meg Davis, I am the Chief Development Officer of Waterfront Toronto.

With me is Kristina Verner, Waterfront Toronto's Vice President, Innovation, Sustainability and Prosperity. She has worked in the field of intelligent and smart communities for 20 years.

We are pleased to have the opportunity to share with this Committee background on Waterfront Toronto and our Quayside project, and the roles and responsibilities of Waterfront Toronto and our Innovation and Funding Partner, Sidewalk Labs.

Of particular interest to this committee, we also want to address the policy considerations presented by the Quayside project, and Waterfront Toronto's perspective on those matters.

Let me assure this committee that Waterfront Toronto is approaching the Quayside project with the full force of the fundamental right to privacy, beyond the strict letter of the law.

Waterfront Toronto:

For those of you not familiar with Waterfront Toronto, we were created in 2001 by the Governments of Canada and Ontario, and the City of Toronto.

We were given a mandate to transform 800 hectares of former industrial lands on the shores of Lake Ontario into thriving neighbourhoods that grow our economy and improve quality of life.

I'm proud to say that the revitalization of Toronto's waterfront is the largest urban redevelopment project currently underway in North America, and it is one of the most significant waterfront revitalization efforts ever undertaken in the world.

This unique tri-government model is clearly working. Since Waterfront Toronto's inception, we have helped generate over $10 billion in new private sector investment and create 26 hectares of new public spaces, including award-winning, iconic parks such as Canada's Sugar Beach and Corktown Common.

This investment has helped create over 14,000 full-time years of employment, 5,000 new residential units, almost 600 affordable housing units, and 1.5 million square feet of commercial office space to date.

Quayside – Innovation and Funding Partner

As members of this Committee are aware, in March 2017, Waterfront Toronto launched an international Request for Proposals seeking an Innovation and Funding Partner to transform part of the waterfront called "Quayside."

This Innovation and Funding Partner would help create a plan for the future neighbourhood and address key priorities, including:

- Fighting climate change by radically reducing energy consumption and household waste

- Offering affordable housing for families and single people alike

- Reducing traffic congestion and improving road safety for drivers, pedestrians and cyclists, and;

- Creating jobs and prosperity by serving as a testbed for Canada's cleantech, building materials, and broader innovation-driven sectors.

The goals we set for Quayside are about using innovation and new ideas to deliver a better, more affordable quality of life. Protecting data and privacy are integral to the realization of these goals.

Like you, Waterfront Toronto is committed to ensuring the use of technology to facilitate better services for people, while at the same time, absolutely protecting personal privacy.

After a rigorous competitive selection process, Sidewalk Labs was selected as our Innovation and Funding Partner.

Their sole job at this point in time, is to prepare for our consideration a "Master Innovation and Development Plan" or "MIDP" for Quayside. They are spending up to $50 million of their own money to prepare this plan. As Kristina will elaborate, the plan will be subject to approval, which is contingent upon protection of privacy as a condition.

Waterfront Toronto has developed a rigorous process to evaluate the MIDP.

This evaluation will use subject matter experts and a due diligence panel, and it will seek public input on the MIDP through consultations. The plan will be reviewed by all levels of government, and Waterfront Toronto's board of directors. If approved, any MIDP proposals will be subject to all usual federal and provincial regulations, and municipal planning approvals.

To be clear, if the MIDP proposed by Sidewalk Labs does not deliver on these priorities, in a manner that is in the public interest, then the proposed an will not be approved by Waterfront Toronto and will not be implemented.

Protection of Data Governance & Privacy:

I would now like to turn the microphone over to Kristina Verner to discuss our approach to the protection of privacy. Kristina:

{Switch to Kristina}

Thank you Meg. I know that protection of privacy is top of mind for every member of this Committee, as it is for Waterfront Toronto and the public we serve, and I appreciate this opportunity.

As Meg just stated, any individual component selected for implementation at Quayside will be subject to all applicable laws from all levels of government.

This of course includes Canada's privacy laws.

While Canada's privacy laws relative to the rest of the world have proven remarkably effective, we recognize that technology is changing all the time which requires Canadian privacy law to evolve.

As a result, I want the Committee to know that Waterfront Toronto is approaching the Quayside project with an expectation of the protection of the fundamental right of privacy, well beyond the strict letter of the law. We know that if this project is going to proceed, it must reflect Canadian values on privacy.

We are guided in this effort by expert committees and advisors, all three levels of government, and continuous, ongoing public consultation.

To this end, Waterfront Toronto has established the Digital Strategy Advisory Panel (DSAP), to guide Waterfront Toronto on how best to incorporate data privacy, digital systems, and the safe and ethical use of new technologies and ensure digital inclusion in the next phase of waterfront revitalization, starting with the Quayside project.

The panel is led by Dr. Michael Geist, the Canada Research Chair in Internet and E-Commerce Law at the University of Ottawa, and a Senior Fellow at the Centre for International Governance Innovation. I understand that Dr. Geist appeared recently before this Committee.

We are also working closely with Chantal Bernier who spent nearly 6 years leading the Office of the Privacy Commissioner of Canada as Interim Privacy Commissioner and as Assistant Commissioner. She now serves as the National Practice Leader, Privacy and Cybersecurity at Dentons.

Chantal is here with us today.

We also regularly seek insight from former three-term Ontario Privacy Commissioner, Ann Cavoukian.

Waterfront's Commitment to Privacy

I would like to specifically outline some of the commitments that Waterfront Toronto has made to protect privacy.

One: In addition to all existing legislative and regulatory requirements, we are committed to the principles of "Privacy By Design." A plan for Quayside would only be approved if it adheres to these principles.

Two: With respect to the protection of personal information, there will be no preferential treatment to any Alphabet company, including Google, regarding linking to, sharing or use of personal data.

Three: Data cannot be used for advertising purposes without express positive consent.

Four: Any personal information will be de-identified at source, unless express consent is knowingly and explicitly given for a specific purpose.

Five: Minimization of data collection, so that only the data needed and identified for a limited and specified purpose would be collected.

Six: Our commitment is that data collected for the Quayside project will be stored in Canada.

Sidewalk Labs has already committed to abiding by all of these key requirements.

We agree with what Ann Cavoukian has often said, we are looking to create a smart city of privacy on Toronto's waterfront, and we are firmly committed to working with our government stakeholders to ensure that this is precisely what is delivered.

At this point I'll turn it back over to Meg.
[Switch to Meg]

Public Engagement:

Over the past year, we have conducted broad public engagement to help inform and shape the MIDP to be proposed by Sidewalk Labs for our consideration. Thousands of people have participated in our consultation process to date, and we intend to hear from thousands more before we finish.

We expect to receive the first draft of the MIDP soon. It will be made available for public input. Only after that public consultation will Waterfront Toronto begin the evaluation process.

Waterfront Toronto will continue to work with federal, provincial and municipal policy-makers to ensure the public is well-served.

Technology and its impact on cities raises questions that are being debated around the world. Quayside is an excellent opportunity for Canada to get these answers.
Thank you for your invitation to present today. We look forward to your questions.

Thank you, Merci.

WATERFRONTORONTO

WATERFRONT TORONTO DIGITAL STRATEGY ADVISORY PANEL

MEETING #1 - AGENDA

June 7, 2018 - 11:00am – 4:00pm
20 Bay Street, Suite 1310, Toronto Ontario M5J 2N8
Boardroom/Townhall Meeting Rooms

11:00 – 11:20am	**Item 1: Opening Session**	
	Welcome & Introductions	W. Fleissig
	Introductory Remarks	M. Geist
	Declarations of Conflicts	Panelists
11:20 – 12:00pm	**Item 2: Process and Governance issues**	
	a) Mandate	Panelists
	b) Governance Matters:	I. Beverley
	i. Confidentiality Agreement	I. Beverley
	ii. Open meeting protocols	I. Beverley
	iii. Indemnity & Directors Insurance	I. Beverley
	iv. Code of conduct	K. Verner
	c) Meeting Schedule & Workplan	
12:00pm – 12:45pm	**Item 3: Waterfront Toronto Overview**	M. Piattelli
12:45pm– 1:30pm	Lunch	
1:30pm – 2:15pm	**Item 4: Sidewalk Toronto Overview**	
	a) Overview of partnership	M. Davis/J. Sirefman
	b) Responsible Data Use Framework	A. Harvey-Dawson/L. Reid
	c) Working thoughts on data governance	A. Harvey-Dawson/L. Reid
2:15pm – 3:15pm	**Questions & Answers**	Panelists
	Panelist Feedback to Sidewalk Toronto	
3:15pm – 4:00pm	**Item 5: Closed Session**	K. Verner
	Sidewalk Toronto Plan Development Agreement	
	The Panel will discuss this item in Closed Session, being an Update on Plan Development Agreement Discussions, as is permitted by By-Law No.2 of the Corporation. The exception relied on for the discussion of this item in Closed Session is Section 6.1.1(l) of By-Law No. 2 (a position, plan, procedure, criteria or instruction to be applied to any negotiations carried on or to be carried on by or on behalf of the Corporation). The Board will continue in Open Session at the end of the Closed Session to discuss and vote on any resolutions pertaining to the Closed Session.	
4:00pm	**Adjournment**	

Waterfront Toronto Digital Strategy Advisory Panel (DSAP) Meeting #1
June 7, 2018 - 11:00am – 4:00pm
20 Bay Street, Suite 1310, Toronto Ontario M5J 2N8
Boardroom/Townhall Meeting Rooms

G. Campbell and S. Tippins observed at the inaugural meeting of the DSAP. Announced in April 2018, the DSAP is an arm's-length entity tasked with providing Waterfront Toronto with objective, expert advice on the responsible use of data and technology across all waterfront projects, including Quayside. It will provide insight on ethics, accountability, transparency, protection of personal privacy, data governance, and cyber security. The DSAP will meet bi-monthly and its proceedings are open to the public. Panel members include:

- **Dave Dame**, Agile Leader, Digital Factory, Scotiabank
- **Charles Finley**, Global Director of Marketing & Communications, IBI Group, and Co-Founder and Chair of Code for Canada
- **Dr. Michael Geist**, Law Professor, Canada Research Chair in Internet and E-commerce Law, University of Ottawa
- **Darin Graham**, Head of Canadian AI Operations, Samsung
- **Kurtis McBride**, Chief Executive Officer and Co-founder, Miovision Technologies Incorporated, and Co-founder, Catalyst137
- **Saadia Muzaffar**, Founder, TechGirls Canada, and Co-founder, Tech Reset Canada
- **Carlo Ratti**, Director, MIT Senseable City Lab, and Founding Partner, Carlo Ratti Associati
- **Dr. Pamela Robinson**, MCIP RPP, Associate Professor, School of Urban and Regional Planning and Associate Dean, Graduate Studies and Strategic Initiatives, Faculty of Community Services, Ryerson University
- **John Ruffolo**, Chief Executive Officer, OMERS Ventures
- **Dr. Teresa Scassa**, Canada Research Chair in Information Law and Policy, University of Ottawa, Faculty of Law
- **Jutta Treviranus**, Director and Professor at Inclusive Design Research Centre, OCAD University
- **Kevin Tuer**, Managing Director, Canada's Open Data Exchange
- **Mark Wilson**, former IBM Executive and former Chair, Waterfront Toronto
- **Alaina Aston**, VP, Data Management & Governance, Personal & Commercial Banking, RBC
- **Andrew Clement**, Professor Emeritus, Faculty of Information, University of Toronto

Michael Geist served as Interim Chair for the Panel's initial meeting.

Key takeaways:

The first half of the meeting was focused on procedural issues, including declarations of conflicts of interest and the parameters of the confidentiality agreement for members. Waterfront Toronto will follow-up with certain members concerning specific aspects of the confidentiality agreement. Members were encouraged to take advantage of Waterfront Toronto's Indemnity and Directors Insurance.

Waterfront Toronto provided an overview of the Toronto Waterfront Revitalization Initiative, including the Port Lands Flood Protection and Enabling Infrastructure Project. Waterfront CEO Will Fleissig emphasized the corporation's areas of focus as being at the intersection of innovation and job creation, city-building, and the public good.

In the afternoon, Sidewalk Toronto presented on its partnership with Waterfront Toronto, including the Framework Agreement; and the Responsible Data Use Policy Framework - not the policy itself, but an outline of principles and commitments that the company says will inform the policy's eventual creation, which will evolve over time. It outlines core principles such as how Sidewalk Labs will seek "meaningful consent" before it collects personal information; will be as transparent as possible about how data will be used; and won't sell personal information to third parties or make it available for advertising purposes.

"Privacy by Design" is at the core of Sidewalk's approach to privacy and it is looking at the data trust model could as component to data governance.

Many panel members cited the principles as a good starting point but noted they were insufficient in-and-of-themselves and that more work would be needed to elaborate and substantiate them. Panel members debated the applications of these principles under different hypothetical scenarios. This lead into debating security concerns around de-identification and civil society issues around surveillance as well as open access to the data platform. Former Ontario Privacy Commissioner Ann Cavoukian, now engaged by Sidewalk Toronto. Was brought in to speak to these issues – which led to animated conversations over the merit of using terms like 'surveillance' in the context of the project.

At one point panel members asked about Sidewalk's Business Model for its involvement in Quayside. It remains unclear as to what precisely is Sidewalk's Business Model for the project.

Panel members also asked about the broader governance of the relationship of project and relationship of governments to it. WT alluded to the IGSC/QESC governance structure involving the 3 levels of government and promised to provide panel members with some type of visual that depicts it (a matter for consideration at the June 14th QESC meeting).

[redacted]

During the closing tour-de-table, panel members mostly expressed their desire to remain engaged and expressed the hope that their work would help lead to outcomes that push the state-of-the-art on a data strategy for Quayside, and not just minimally satisfy existing legal and policy frameworks around for privacy and data security.

N.B. representatives from Statistics Canada (led by ADM Sylvie Michaud) observed at the meeting. A follow-up meeting between Statistics Canada and INFC will be held will be held to better understand Statistics Canada's interest in the DSAP.

A verbal debrief of key outcomes from the first DSAP meeting is expected at the June 14th QESC call. The date for the next DSAP meeting is TBD.

WHAT'S A SMART CITY?

Quayside Civic Labs

The Quayside Civic Labs Info Sheet Series

This is the first in a series of Info Sheets Waterfront Toronto has developed to support a meaningful public discussion about the potential future of Quayside – specifically, its digital future.

What does that mean exactly? This Info Sheet explains the ways and places that technology can influence a city. Info Sheet 2 focuses on information laws and regulations and Info Sheet 3 looks at data collection and use.

A new kind of city

A smart city introduces something new to cities: *digital technology aimed at improving decision-making and service delivery.* Smart cities have ubiquitous networks, internet-connected sensors that collect data, computers that receive, analyze, and store data, and services that respond to that data. Just like smartphones or smart thermostats, the big idea behind smart cities is that data can enable new services that can make life better. The picture below shows some examples.

Cities around the world in Europe, Asia, and North America are "going smart." In Trikala, Greece, smart city screens tell citizens about the availability of parking spaces and the town hall's monthly budget. In Glasgow, energy costs have gone down as the result of streetlights that dim when there is no activity around them. Barcelona, Singapore, Vienna, San Francisco, and Copenhagen are all implementing smart sensors and big data analytics to optimize management of city services from trash collection to transportation to air quality.

A new kind of discussion

Smart cities introduce a host of new opportunities and risks for city building, provoking the need to have new conversations about the consequences associated with different choices. Waterfront Toronto is working with some of Canada's leading thinkers – governments, academics, industry leaders, advocacy organizations, and others on its Digital Strategy Advisory Panel – to ensure that decisions related to the digital future of Quayside are based on a solid understanding of these consequences. But that alone is not enough. Waterfront Toronto's commitment to working in the public interest means that public feedback about choices and consequences is also critical.

Read on to find out what feedback Waterfront Toronto needs from you. To learn more, visit our website: www.waterfrontoronto.ca.

A recent history of Quayside (and the introduction of Sidewalk Labs)

About Waterfront Toronto

Waterfront Toronto was created by the three levels of government to act as a catalyst and steward for the revitalization of Toronto's waterfront. Early in its existence, the organization identified ambitious goals, setting high standards for innovation in environmental sustainability, urban design, public realm design, and affordability. Guided by these goals, Waterfront Toronto helped shape the transformation of areas like the West Don Lands, East Bayfront, Queen's Quay, and more.

About Quayside and finding an "Innovation and Funding Partner"

Waterfront Toronto owns a large part of the 12-acre parcel of land at the eastern edge of the central waterfront known as Quayside. In 2017, looking to once again raise the bar for innovation in city building, Waterfront Toronto issued a Request for Proposals seeking an "Innovation and Funding Partner" for Quayside. The Request for Proposals sought a unique partner, one with invention ingrained in its culture. Waterfront Toronto was not looking for a "smart city" vendor, but a company or consortium that would provide broad perspectives, deep expertise, and significant financial resources to be able to meet the ambitious goals outlined in the RFP.

About Sidewalk Labs

Six companies responded to the RFP, and after a rigorous selection process, overseen by a Fairness Monitor, Sidewalk Labs (an Alphabet company and sister company to Google) was awarded the right to create a plan for Quayside. The Sidewalk Labs proposal included ideas that were familiar — high-quality public spaces, a focus on public transit, walking, and cycling — and ideas that were unique, most notably a digital element that would make Quayside a community that would benefit from technology.

About the Plan Development Agreement (PDA)

Waterfront Toronto and Sidewalk Labs created a Plan Development Agreement (PDA) to guide their working relationship, including roles and responsibilities related to developing the plan for Quayside. The PDA includes a schedule that identifies initial digital governance principles that would serve as guidance during the preparation of the MIDP proposal.

About the MIDP

Sidewalk Labs has been working on a Master Innovation and Development Plan (MIDP) plan for Quayside that will ultimately be submitted to Waterfront Toronto's Board of Directors for review and consideration. Waterfront Toronto has been developing a rigorous framework to evaluate the MIDP. Sidewalk Labs will submit the MIDP to Waterfront Toronto staff, who will evaluate the MIDP in detail and make a recommendation on approval to the Waterfront Toronto Board. Any implementation of the ideas in the MIDP would be subject to Waterfront Toronto's Board approval and negotiation of further implementation agreements.

Current MIDP Timeline

	Remaining 2018	Q1 2019	Q2 2019	Q3 2019
Public consultation				
Consultation with government partners				
Draft MIDP published for consultation				
Final MIDP proposal				
MIDP review and evaluation				
MIDP proposal consideration by Waterfront Toronto Board				
City of Toronto Review				

City Public Consultation and Staff Report Q2 / Q3 2019

What does “smart city” mean?

Smart cities apply digital technologies to entire neighbourhoods, offering a range of urban services like weather protection (awnings that extend when sensors recognize that it’s raining), responsive transit service (if sensors recognize a group of people is waiting at a transit stop), water management (such as only triggering sprinklers if sensors read that soil is dry), and more. Smart city advocates see data as another utility — like water or electricity — that can help improve urban life.

Smartphones and smart thermostats can help us better understand smart cities: they use sensors, the internet, and data to provide “smart” services. In order to receive these services, users must accept terms of service that consent to the company or organization that makes the product collecting and using the data. Many people accept these terms, excited to receive the benefits the products offer (though they may not understand or pay close attention to terms of service they are agreeing to); others do not, concerned about the amount of information the company or organization could collect about them, how secure the information is, and what other uses the company may have with the data. The table below shares more detail about these products and the spectrum of opinions about them.

What the product is	Example of smart service	How it works	Example of what gets people excited	Example of what concerns people
Smart thermostat	Automatic temperature control based on a user’s location	A user gives the thermostat permission to monitor their location using their smartphone and modifies the temperature based on their movements.	The thermostat monitors when the user leaves work and turns the furnace on at their home to make sure the space is comfortable when they arrive, therefore saving money, energy, and reducing unnecessary energy use.	The company that makes the thermostat collects and stores data about the user’s location or schedule, which could be used for things other than controlling the house’s temperature.
Smartphone 	Navigation services	A user gives the phone and an application permission to see their location and destination. The application helps the user navigate to their destination.	The smartphone and application can read traffic patterns in real-time and help them find the most efficient route to their destination, saving them time.	Private companies amass large datasets about public traffic patterns and then sell it to local governments to inform transportation planning, charging taxpayers to receive benefits from public data.

Key issues related to the digital elements of a smart city

In conversations about Quayside to date, a number of key issues have emerged, including digital laws and regulations and data collection and use. Info Sheets 2 and 3 look at these topics in more detail.

Info Sheet 2: Digital laws and regulations
Digital laws and regulations refer to the public policies and legal frameworks that regulate how individuals, governments, and corporations can collect, access, store, and use digital information and data. These policies and frameworks are important tools that governments use when striving to serve and protect the public interest as digital products and services become more integrated in people's private and public lives.

Digital Laws and Regulations matter to many people interested in smart cities because they see the Quayside proposal as initiating a new frontier in public policy and see Canada, Ontario, and Toronto's current laws as outdated and potentially insufficient to protect the public interest.

Info Sheet 3: Data collection and use
Data collection and use refers to how data could be collected and used in smart communities. Beyond environmental data (such as the temperature, current weather conditions, number of parking spots occupied by cars, etc.), there is also personal data (who is in the park, how much time did they spend there, what did they just throw into the garbage).

While some see data collection and use as being necessary to providing new services that can improve urban life, reduce the costs associated with service delivery, and reduce environmental footprints, others are concerned about issues like privacy, racial profiling, surveillance, and the privatization of public data.

What do you think?

Waterfront Toronto will be reviewing the Master Innovation and Development Plan that will be submitted by Sidewalk Labs and will need to determine how well it reflects the public interest. Our questions for you:

1. What issues would you like to see Waterfront Toronto consider as they review the digital proposals related to Quayside?
2. How do you think Waterfront Toronto can best determine what's in the public interest when dealing with the opportunities and challenges that are associated with smart cities?
3. Do you have any other feedback or advice related to smart cities that you'd like to share with Waterfront Toronto?

You can provide this feedback by emailing us at CivicLabs@waterfrontoronto.ca with a written submission. **Please send your thoughts by December 21, 2018** so that we can feed them into our decisions making process. A summary of all written feedback received will be shared publicly early in early 2019.

In addition to the Quayside Civic Labs Info Sheet series, there are a wealth of resources available online reflecting the range of perspectives and ideas that are being discussed around the world related to smart cities. We've highlighted only a few here to get you started:

Civic Tech Toronto www.civictech.ca • Cities for Digital Rights www.citiesfordigitalrights.org
Open North www.opennorth.ca • Centre for International Governance Innovation (CIGI) www.cigionline.org
Sidewalk Labs www.sidewalklabs.com • Office of the Privacy Commissioner of Canada www.priv.gc.ca
City of Toronto www.toronto.ca • Information and Privacy Commissioner of Ontario www.ipc.on.ca/
Decode www.decodeproject.eu • Smart Cities Challenge www.infrastructure.gc.ca/cities-villes/index-eng.html
Future Cities Canada www.futurecitiescanada.ca/ • Intelligent Community Forum www.intelligentcommunity.org

There are many public opportunities to learn more about the more traditional city-building elements being considered at Quayside, whether that be roads or buildings, parks or waste management, or housing and public realm. **Visit the Waterfront Toronto website to learn more:**

www.waterfrontoronto.ca

DATA COLLECTION & USE

Quayside Civic Labs

The Quayside Civic Labs Info Sheet Series

This is the third in a series of Info Sheets that Waterfront Toronto has developed to support a meaningful public discussion about the potential future of Quayside – specifically, its digital future.

Info Sheet 1 explains some of the ways and places that technology can influence a city. Info Sheet 2 identifies relevant information laws and regulations, and Info Sheet 3 goes into more detail on data collection and use.

Many uses for data

Data has been collected and used in planning and managing cities for centuries. Why? Because it can lead to more informed decisions and more responsive services. For example: if there are ten cars waiting at an intersection and zero cars going in the other direction, this could be a sign that the city's traffic lights are not programmed to provide the most efficient service. If city planners collect and use data about traffic patterns, they can tweak the timing of the lights to provide better service. This same logic can be used for pedestrian crossings, bike crossings, etc.

Collection, storage, use, and consent

What has changed with smart cities is that people have the potential to be personally identified by digital infrastructure. Some of the big issues that come up in talking about smart cities and personal information are:

- Collection and storage. Who is collecting what information about me? Is the storage of data absolute essential to providing these services? How and where are they storing that data? How secure is data about me? Who has access to it?
- Data use. What are they using data about me for?
- Consent. How do I provide or revoke consent for the use of my personal data?

Thinking about smart cities involves thinking about how to best take advantage of the benefits they offer while thinking through these kinds of questions. In others word, how do we decide and do what's best for everyone?

Read on to find out what feedback Waterfront Toronto needs from you. To learn more, please visit our website: www.waterfrontoronto.ca

Example of

Data collection and storage

In order to make data driven decisions, the data must first be collected. Some service providers say that data must also be stored so that they can train the software that drives smart city services. Big issues in data collection and storage are data residency and the right to be forgotten.

What is data residency? How does it impact me?

While digital data is held on virtual rather than physical platforms, the technology storing the data is physical: data is stored on data servers. Data servers are held in data centres around the world. The term data residency refers to the physical or geographic location of data servers and data centres, though they connect across borders.

Regulatory Requirements

In Canada, there are some legal provisions that require storage of personal data in Canada, but in general, storage abroad is allowed. In fact, in the new USMCA, which will replace NAFTA, Canada, Mexico and the US have agreed that, in general, they will not impose data residency requirements in their territory.

The difference of storing data in Canada, versus storing it abroad, is that while the data remains in Canada, it remains fully within the protection of Canadian laws. When data is stored abroad, the laws of the country where the data is stored also apply, and they may not correspond to the privacy protection level we want. That makes data residency relevant to individuals.

Canada's Personal Information Protection and Electronic Documents Act (PIPEDA) has been interpreted to require that individuals be informed, through a privacy policy for example, that their data is being stored abroad.

What is the "right to be forgotten?"

The "right to be forgotten" means the right to have one's data deleted upon request, if it is no longer necessary. In Europe, it has been enshrined in the General Data Protection Regulation (GDPR) as the "right to erasure." In this sense, it means the right to have one's personal information de-indexed and therefore made non-searchable on the internet when it is no longer accurate, for example, through the passage of time.

In Canada, the Office of the Privacy Commissioner of Canada is currently before the Federal Court requesting a determination as to whether the right to erasure exists in Canada.

Data use

How data is used is a key issue in smart cities. Is the personal information being collected about me being used to inform decisions about traffic planning, for example? What else is it being used for? Is it being used to assist law enforcement? Or make money for a private company through advertising? One topic that comes up often in discussions about data use is algorithms.

Algorithms

Algorithms are instructions that can be understood by a computer to solve a problem or complete a task. Algorithms are also referred to as the logic models that machines use to analyze data. Machines (i.e. computers) use algorithms to make decisions and those decisions depend on a number of different factors — including the quality and representatives of the data the algorithm is using. There are many discussions happening around the world exploring how to ensure the ethical and accountable use of algorithms in decision-making. This includes ensuring that mechanisms are in place to detect and address any mistakes or unintended consequences of decisions that computers make using algorithms.

Consent

With products like smartphones and smart thermostats, individuals consent to sharing personal information to receive the benefits the products offer. Often, individuals feel obligated to consent to the collection and use of their data by third parties in exchange for access to an app or service. Many times, the terms and conditions surrounding that consent are so complex that users simply accept them without reading the details, therefore surrendering any form of meaningful consent. Many feel this approach is unacceptable in the context of a smart city, so there are important discussions to have about how personal data can be collected, stored, analyzed, and transmitted in smart cities, while ensuring users have the ability to meaningfully consent to participate (or not) in these actions. Organizations also face challenges managing consent, such as when individuals revoke consent after having already provided it.

These are some of the solutions adopted in Glasgow: excluding or including information such as traffic notifications, structuring the smart city according to a “menu” of services based on the use of personal data with express consent (and providing direct consent withdrawal as well as the option of deletion of personal data collected with consent).

The form below is an example of how the City of Toronto seeks consent to use personal information (in this case a name, association, and email address) on a sign in sheet at a public meeting.

WHAT DO YOU THINK?

Waterfront Toronto will be reviewing the Master Innovation and Development Plan that will be submitted by Sidewalk Labs and will need to determine how well it reflects the public interest. Our questions for you:

1. What issues would you like to see Waterfront Toronto consider as they review digital proposals related to Quayside?
2. How do you think Waterfront Toronto can best determine what's in the public interest when dealing with the opportunities and challenges that are associated with smart cities?
3. Do you have any other feedback or advice related to smart cities that you'd like to share with Waterfront Toronto?

You can provide this feedback by emailing us at CivicLabs@waterfrontoronto.ca with a written submission. **Please send your thoughts by December 21, 2018** so that we can feed them into our decisions making process. A summary of all written feedback received will be shared publicly early in early 2019.

INFORMATION LAWS & REGULATIONS

Quayside Civic Labs

The Quayside Civic Labs Info Sheet Series

This is the second in a series of Info Sheets that Waterfront Toronto has developed to support a meaningful public discussion about the potential future of Quayside – specifically, its digital future.

What does that mean exactly? Info Sheet 1 explains some of the ways and places that technology can influence a city. Info Sheet 2 identifies relevant laws and regulations, and Info Sheet 3 goes into more detail on data collection and use.

Public Policies and Legal Frameworks
There are public policies and legal frameworks that ensure governments and corporations can collect, access, store, and use digital information and data in compliance with applicable law. These policies and frameworks keep organizations compliant and accountable for the use and protection of personal information on digital products and services in a way that respects laws on individual consent, transparency of use and exercise of privacy rights.

Developing New Frameworks
In recent years, governments across the world have been developing new regulatory frameworks to respond to the unprecedented amount of data that public institutions and private companies have been amassing about individuals: contact information, relationships, movements, purchase histories, communications, and much more. While this information enables exciting services that were impossible a decade ago, the collection, storage, and use of data has to be tightly managed to be contained to what is permissible under privacy law. Digital governance spells out this management duty.

Waterfront Toronto is working closely with leaders in the legal field and in government, as well as their Digital Strategy Advisory Panel (DSAP) to ensure that a current and comprehensive understanding of relevant laws informs the review of all proposals related to Quayside.

Read on to find out what feedback Waterfront Toronto needs from you.

Relevant Law in Canada

Legislation that is applicable to a smart city in Toronto includes (but isn't limited to):

Canadian Charter of Rights and Freedoms
Under Section 8 of the Charter, we are protected from unreasonable search and seizure by governments. Concretely, that means no government in Canada has the right to collect or use our personal information unless it is demonstrably justified in a free and democratic society. At the city level, this most often arises in relation to the use of CCTVs, which is allowed under strict conditions of necessity.

continued on page 2...



There are many public opportunities to learn more about the more traditional city-building elements being considered at Quayside, whether that be roads or buildings, parks or waste management, or housing and public realm. Visit the Waterfront Toronto website to learn more:

www.waterfrontoronto.ca

Relevant Law in Canada

Continued from page 1

Personal Information Protection and Electronic Documents Act (PIPEDA) (Canada)

PIPEDA creates obligations for the private sector to respect privacy of individuals in the course of commercial activities. These obligations include collecting, using or disclosing personal information only with valid consent, never using this information for other purposes than for what it was consented, being transparent about management of personal information, protecting the information at the level of its sensitivity and providing individual access upon request of the personal information that relates to the requester.

Privacy Act (Canada)

The Privacy Act applies to federal government institutions. It states the rules by which the government of Canada can collect, use or disclose personal information. The government can only collect or use personal information when it is related to its activities. The Charter of Rights and Freedoms applies as well to define that as meaning to what is necessary to its activities. Just like under PIPEDA, the government of Canada must provide individual access to a person's personal information upon request.

Municipal Freedom of Information and Protection of Privacy Act (Ontario)

This Act requires that local government institutions protect the privacy of an individual's personal information existing in government records. Under this Act personal information can only be collected if it is 1) expressly authorized by statute, 2) used for the purposes of law enforcement, or 3) necessary to the proper administration of a lawfully authorized activity. MFIPPA also gives individuals the right to request access to municipal government information, including most general records and records containing their own personal information.

Freedom of Information and Protection of Privacy Act (Ontario)

This Act applies the same obligations as MFIPPA to provincial institutions.

New Concepts in Smart Cities

The lingo of smart cities includes new concepts of "data trusts", "privacy by design" and "open data". This is how they are generally interpreted:

Data Trust

"Data trust" may refer to various structures because it is not a legally defined term. In relation to smart cities, a data trust is understood to designate an oversight structure for ensuring compliance with applicable laws within a smart city digital use framework.

Since the notion of data trusts is still evolving, some question its applicability to data, taking the term "trust" in its traditional legal application to the management of assets. Some equate a "data trust" to a compliance office that ensures, within an organization, respect for laws applicable to data.

Privacy by Design

Privacy by design (PbD) refers to the integration of privacy protection from inception of any product, service or initiative. The only existing legal definition of PbD is the General Data Protection Regulation. It requires the implementation of "appropriate technical and organizational measures (…) to integrate the necessary safeguards into processing."

Open Data

Open Data refers to the principle of Open Government and being transparent without compromising personal identifiable information. The implementation of "Open Data" takes many forms. In the context of smart cities, which pursue, among other objectives, greater democracy and citizen participation, Open Data means data that is free from restrictions such as copyright or government control.

While many see Open Data as a way to empower citizens and share in the value of data, others argue that Open Data devalues data as an asset; that it escapes data value management and that the costs of making data open – which requires analysis of applicable restrictions such as privacy and copyright – is not recovered in value.

WHAT DO YOU THINK?

Waterfront Toronto will be reviewing the Master Innovation and Development Plan that will be submitted by Sidewalk Labs and will need to determine how well it reflects the public interest. Our questions for you:

1. What issues would you like to see Waterfront Toronto consider as they review digital proposals related to Quayside?
2. How do you think Waterfront Toronto can best determine what's in the public interest when dealing with the opportunities and challenges that are associated with smart cities?
3. Do you have any other feedback or advice related to smart cities that you'd like to share with Waterfront Toronto?

You can provide this feedback by emailing us at CivicLabs@waterfrontoronto.ca with a written submission. **Please send your thoughts by December 21, 2018** so that we can feed them into our decisions making process. A summary of all written feedback received will be shared publicly early in early 2019.

Pages 42 to 43
are withheld
pursuant to paragraph
20(1)(b)
of the *Access to Information Act*

****

Les pages 42 à 43
font l'objet d'une exception totale
conformément à la disposition de paragraphe
20(1)(b)
de la loi sur l'accès à l'information

WATERFRONT TORONTO STATEMENT ON RECENT MEDIA REPORTS REGARDING THE THE QUAYSIDE PROJECT

February 15, 2019

FOR IMMEDIATE RELEASE

Toronto, ON

In 2017, following a competitive RFP process, Sidewalk Labs was selected by Waterfront Toronto to develop a plan for Quayside as a testbed for the broader revitalization of Toronto's waterfront.

Our goal for the project was to improve urban living and explore solutions for growing urban challenges such as housing affordability, environmental sustainability, economic development and prosperity, and integrated transit solutions.

While preliminary plan concepts from Sidewalk Labs have been shared with us, we have not received a full proposal that includes an underlying business plan. However, we expect to receive a full proposal, called the Master Innovation and Development Plan (MIDP), in the coming weeks.

Waterfront Toronto has developed rigorous internal process to evaluate the MIDP to ensure that it meets important objectives including job creation, climate positive, affordable housing and urban innovation. This evaluation will use subject matter experts and a due diligence panel that will evaluate if proposals in the MIDP represent sound solutions for the urban challenges and represent good value for the people of Toronto.

Beyond the evaluation, Waterfront Toronto will seek public input on the MIDP through consultations. In addition, the MIDP proposals will be subject to federal and provincial regulations and municipal planning permissions.

If the MIDP from Sidewalk Labs does not deliver on the priorities that we have set out for Quayside, in a manner that is in the public interest, then the proposed plan will not be implemented.

For 20 years we have worked closely with the public and our government partners and set a high standard for waterfront revitalization and city-building. Waterfront Toronto must maintain the public's confidence to meet the highest standards of transparency, openness, and fairness in our work to further revitalize Toronto's waterfront. We will continue to work diligently to achieve this standard for Quayside.

— 30 —

For media inquires:

Andrew Tumilty

Waterfront Toronto

atumilty@waterfrontoronto.ca

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THE GLOBE AND MAIL

Globe and Mail | Comment | A15

Sidewalk Toronto is a smart way to build a neighbourhood

Mark Wilson

A former IBM executive, serves on the boards of several Toronto cultural institutions. He was chair of the board of **Waterfront Toronto** from 2007 to 2016.

Somehow, we're at risk of losing the plot on "Sidewalk Toronto," **Waterfront Toronto's** joint effort with Sidewalk Labs to create a new sustainable, affordable neighbourhood by the lake through forward-thinking urban design supported by leadingedge technology. Or, should I say, to develop a proposal for such a neighbourhood. Because that's all that's happening right now.

In March, 2017, **Waterfront Toronto**, looking at problems facing our city - from the skyrocketing cost of housing to a growing transit and congestion emergency - decided to try something radically different with land it owned at Parliament Slip. Instead of using its proven model of master planning followed by publicly tendering land for development, **Waterfront Toronto** issued a request for proposal (RFP) for an innovation partner to make a new neighbourhood, **Quayside**, as a demonstration project for big solutions to big problems. Higher levels of affordability, mobility, sustainability and economic opportunity were **Quayside's** targeted outcomes. Solutions piloted there could be taken up across the **waterfront**, the Greater Toronto Area and beyond.

Sidewalk Labs was started by Alphabet, **Google's** parent, to pursue the mission of improving life in cities. It's a for-profit enterprise, with the benefit of patient capital only a company such as Alphabet could provide.

Sidewalk Labs responded to **Waterfront Toronto's** RFP and was selected through a robust procurement process.

Given some of the criticism, you might be surprised to learn that Sidewalk Labs did not get any land as a result of winning this RFP - not a square metre. Instead, it committed US$50-million to develop a plan, with absolutely no guarantee it would be adopted and with onerous government-approval requirements.

Sidewalk did so both because it believed Toronto was the best city in which to do this work, and because it was convinced of the feasibility of the innovative ideas and objectives at the heart of the project.

Yes, it is taking considerably longer than originally envisioned, and answers to key questions - including those related to digital governance - still need to be provided in the public process.

So what? Take the time to get it right. Not even the first draft of a plan has been finished, let alone has anyone asked for approval.

Among the issues being addressed with an array of expert Canadian advisers: How to fund not just traditional infrastructure, but digital and social infrastructure creating an inclusive community while facilitating innovation from Canadian players (not just Sidewalk)? How to deploy technology while protecting personal privacy and the public interest? How to manage data and intellectual property?

I have a glimpse of this work serving on a panel advising **Waterfront Toronto** on its digital strategy, focused on **Quayside**. I also served on **Waterfront's** board for 14 years, including 10 as chair, although my tenure ended before this project was hatched.

As **Waterfront** and Sidewalk are doing what they said they would do, the volume of criticism is rising. It can be hard to determine what's going on because of the mix of voices involved.

Some are committed urbanists and privacy advocates worried about whether this project will deliver the benefits it promises while protecting the public interest. They want to ensure that the final plan isn't rushed through or rubber-stamped by governments. I am confident that won't happen, but vigilance is healthy.

Others come to this discussion with different agendas: animus toward all global technology firms, including **Google**; opposition to any role by the private sector in developing a digital strategy; or longstanding resentment over **Waterfront Toronto's** role in revitalization efforts, despite its successful track record.

Listen to them, and this all started with evil intentions and must be stopped.

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Waterfront Toronto and Sidewalk Labs can't point any of this out and have been taking a lot of punches lately. But the "tell" is that opponents want to shut down the project before a proposal is even offered. Perhaps they fear that it might be something good for Toronto - a plan that breaks new ground, delivers real solutions and addresses digital governance.

That kind of plan might be embraced and approved - much to their disappointment.

GARY MASON will return

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MIN-DM, June 18, 2018. Item: Waterfront Toronto (WT) / Sidewalk Labs

The Minister will be meeting with WT executive leadership and federally-appointed Board members on June 22. WT will provide updates on the Port Lands and Cherry Street Lakefilling projects. Expected attendees include WT CEO Will Fleissig and staff, and the following Board members:

- Ms. Helen Burstyn, Chair of the Board of Directors, Waterfront Toronto (Ontario)
- Ms. Janet Rieksts-Alderman, Director, Waterfront Toronto
- Ms. Jeanhy Shim, Director, Waterfront Toronto
- Mr. Mazyar Mortazavi, Director, Waterfront Toronto
- Ms. Sevaun Palvetzian, Director, Waterfront Toronto

Toronto Waterfront Revitalization Initiative (TWRI)

- WT is a not-for-profit entity established under provincial legislation to lead and implement the TWRI. The Province, City of Toronto and Federal Government each appoint four of its twelve Board members. The DM of INFC is chairing the Inter-Governmental Steering Committee (IGSC) for the TWRI this year, a senior officials-level information sharing and coordinating body among the three levels of government and WT. It will meet again in September.

Quayside:

- Following a Request for Proposal (RFP) for a development funding partner, WT and Sidewalk Toronto entered into a Framework Agreement in October 2017 consisting of community engagement, joint planning and project testing.
- Under the Framework Agreement, WT and Sidewalk are working on establishing a Partnership Development Agreement (PDA), a public document that will provide a work plan to ultimately complete a Master Innovation and Development Plan (MIDP) by the end of the calendar year. A draft PDA will be available for WT Board review and governments' review in early-mid July.
- At the same time WT and Sidewalk are undertaking a public engagement process involving town-halls and other means to keep the public informed and reflect feedback in the Quayside initiative as it moves forward. WT has also established an arms-length Data Strategy Advisory Panel to provide insight on ethics, accountability, transparency, protection of personal privacy, data governance and cyber security as the Quayside initiative develops.
- Since it is not a funding partner, the federal interest in WT's engagement with Sidewalk Toronto on the Quayside project is to understand how activities will inform Government of Canada policy development on data ownership/control, privacy and ethics. INFC acts as a portal for linking to the broader federal community on policy questions and other issues.

Port Lands Flood Protection / Cherry Street Lakefilling

- The contribution agreement for Port Lands came into effect on May 1 and INFC is establishing an oversight committee with WT to monitor compliance. WT has also taken steps to commence the planning and implementation phase, and is planning to start site mobilization in the first week of July.
- WT has satisfied federal duty to consult requirements to date and is engaged with First Nations communities on a means to formalize their involvement in public realm and other project aspects.
- Funding was also included for the Cherry Street Stormwater and Lakewater project under the Clean Water and Wastewater Fund (CWWF). Cherry Street lakefilling is advancing, with barges currently delivering core stone fill onsite.

ATIA - 21(1)(a)
ATIA - 21(1)(c)
ATIA - 21(1)(b)

WATERFRONT TORONTO
DM BRIEFING

Top Lines

[redacted]

Saadia Muzaffar resignation letter and the DSAP - GLENN

- Letter has been made public
- Critical of the partnership with Sidewalk but more focused on Waterfront itself and charge that its leadership is failing to address public concerns around data collection and governance for Quayside

Media articles - GLENN

- Initial rush of negative coverage was followed by some counter-balance

[redacted]

- Over coming weeks/months, media likely to closely track: DSAP meetings, release of 5-year Plan, provincial audit report and the Master Innovation and Development Plan

[redacted]

- Have a tri-government ADM-level call this week with our respective Comms Directors
- Comms shared a dashboard that the Bridges team produces weekly for your office. Team is going to see if and how best this could be adapted to the Waterfront context

WT Board of Directors Meeting, October 11th – NANCY/SHAWN

[redacted]

- Waterfront previewed a dashboard it has created to track progress of the MIDP; separately, Waterfront will be inviting feedback from governments

- Team will work with POB to review draft 5-Year plan and can come back with a summary brief, including as it relates to governance/areas of concerns; and will link with tri-government partners to exchange views on same in preparation for IGSC.

[redacted]

DSAP Meeting October 18th – NANCY/SHAWN

- Waterfront going ahead with DSAP meeting on October 18th (team will be attending)
- Sidewalk presenting an updated version of its Responsible Use Data Policy Framework
- [ADD HIGHLIGHTS FROM FRAMEWORK IF POSTED IN TIME]
- Framework is a key deliverable under the MIDP as one of its 12 "pillars"
- DSAP is mandated to advise Waterfront on the Framework
- Waterfront will be presenting deck on two proposed Civic Labs which will cover (1) data/digital governance on November 6th and (2) IP [DM has copy from weekend package]
- Deck proposes a series of questions for DSAP to cover during the Labs – multiple references to roles of different levels of government (e.g., what are governments considering and , what lessons from Quayside could they apply)
- Waterfront has signaled strong interest in having active federal participation at these Labs

- Team has approached ISED about lending their expertise, along with INFC, at both Civic Lab events
- We will work with Smart Cities and ISED to develop a strategy for approach and content regarding participation, calibrated to appropriate level of intervention

Mapping of Key WT-Related Upcoming Events/Milestones (INFC) - GLENN

Internal - Pre-IGSC Outreach and Coordination

- October 17th: ADM tri-government teleconference on Wednesday this week; each of our respective communications advisors will join so we can collectively map out a plan for coordination
- Week of October 29th: ADM tri-government teleconference prior to DM-level call
- November 5th: targeting DM-level call
- Weekly calls now instituted with Waterfront Chief Development Officer Meg Davis

Waterfront-Related Events

- REFER TO TABLE
- [redacted] Civic Lab being hosted by Waterfront on the morning of November 6th (same day as IGSC)

ATIA - 21(1)(b)
ATIA - 21(1)(c)

MAPPING OF KEY WT-RELATED UPCOMING EVENTS / MILESTONES

Date	Event	INFC Objective	Comment
October 12	Waterfront Toronto Board meeting	[redacted]	[redacted]
October [15]	[redacted]		
October 15	INFC Minister meeting with Dan Doctoroff, Sidewalk Labs		
October 18	Digital Strategy Advisory Panel (DSAP) meeting		
October 25	DM attendance at ISED-led engagement with Dan Doctoroff, Sidewalk Labs		
Late Oct / early Nov	[redacted]		
November 6	Inter-Governmental Steering Committee (IGSC) meeting		
December 6	Waterfront Toronto Board meeting		
January 17	IGSC meeting – [redacted]		

ATIA - 21(1)(b)

ATIA - 21(1)(c)

Waterfront Toronto -Sidewalk Labs timeline of key events and deliverables: Fall 2018 – Spring 2019

IGSC engagement / Key WT-SWL milestone / Key public engagement / **WT legislatively-mandated plan** / Tri-gov't staff-level engagement

Sept

- Sept 5: Staff-level telcon re. WT Long-term funding plan (annual plan)
- **Sept 6 IGSC: Port Lands update; Quayside update; Quarterly financial update, ERP status; WT 5-year plan; tri-gov't accord**
- Sept 13: Staff-level telcon re. preliminary discussion of WT 5-year plan

Oct

- Oct 3: DSAP-linked 'Civic Lab' #1 – public engagement event that discusses PDA data governance principles
- Oct 18: DSAP #4

Nov

- **Early Nov : WT/SWL release comprehensive description of component parts of MIDP, likely in form of an annotated Table of Contents**
- Date TBC: WT/SWL Public Roundtable #4 discusses MIDP components including proposed site plans
- Nov 7: DSAP-linked 'Civic Lab' #2 discusses privacy, algorithmic transparency, broader ethical issues (hosted at Ryerson U)
- **Nov 8 IGSC: Briefing on Components parts of MIDP;** [redacted]

Dec

- Dec 5: DSAP-linked 'Civic Lab" #3 discusses data ownership business models and IP
- Dec 13: DSAP meeting #5
- **TBC: WT Long-term funding Plan (annual plan) approved by WT Board of Directors; received by 3 orders of gov't**
- **TBD: WT 5-year plan approved by WT Board of Directors; received by 3 orders of gov't (extension into early 2019 to develop 5-year plan?)**

Early 19

- **Early 2019: Complete work-in-process draft MIDP released for public consultation**
- TBC: WT/SWL Public Roundtable #5 solicits feedback on the draft MIDP
- **Jan 17 IGSC:** [redacted]

Spring 19

- **Date TBC: WT/SWL publish proposed MIDP in finished form for consideration by WT Board of Directors and by the Alphabet Board**
- Date(s)TBC:
- **IGSC (TBC):** [redacted]

Sidewalk Toronto Roundtable #4 Agenda

Saturday, December 8, 2018 | Metro Toronto Convention Centre

Morning Session Overview				
Saturday, 8 December, 2018 || 9:00am - 12:30pm				
9:00 a.m. - 9:30 a.m.	Registration & Information Stations Location: MTCC South Building, Level 7 Foyer (west end) Talk to Waterfront Toronto and Sidewalk Labs staff about the Sidewalk Toronto project. Leave your comments on one of our feedback boards or chat with one of our facilitators.			
9:30 a.m. - 10:30 a.m.	Plenary Presentation and Q&A Location: 701 A/B Hear from Waterfront Toronto about the project objectives and the criteria against which the proposed Quayside Master Innovation and Development Plan will be assessed. Sidewalk Labs staff will then walk you through concept site plans for Quayside highlighting the innovation that makes this neighbourhood unique. A short question and answer session will follow. Then, you will have the chance to take a deeper dive into the topic of your choice during breakout discussion sessions. *Light refreshments will be provided, including coffee, tea, water and cookies. Gluten free and vegan options will be available.*			
10:30 a.m - 10:40 a.m.	Move to Breakout Rooms - Rotation 1			
	Breakout #1	Breakout #2	Breakout #3	Breakout #4
10:40 a.m. - 11:30 a.m.	**Quayside Site Plan & Transportation** Location: 701 A/B	**Affordable Housing & Social Infrastructure** Location: 703	**Digital Governance** Location: 705	**Sustainability** Location: 707
11:30 a.m. - 11:40 a.m.	Move to Breakout Rooms - Rotation 2			
	Breakout #1	Breakout #2	Breakout #3	Breakout #4
11:40 a.m. - 12:30 a.m.	**Quayside Site Plan & Transportation** Location: 701 A/B Note: this is a repeat session	**Affordable Housing & Social Infrastructure** Location: 703 Note: this is a repeat session	**Digital Governance** Location: 705 Note: this is a repeat session	**Sustainability** Location: 707 Note: this is a repeat session
12:30 p.m.	Roundtable concludes			

Afternoon Session Overview Note: This is a repeat of the morning session				
Saturday, 8 December, 2018 || 1:30pm - 5:00pm				
1:30 p.m. - 2:00 p.m.	Registration & Information Stations Location: MTCC South Building, Level 7 Foyer (west end) Talk to Waterfront Toronto and Sidewalk Labs staff about the Sidewalk Toronto project. Leave your comments on one of our feedback boards or chat with one of our facilitators.			
2:00 p.m. - 3:00 p.m.	Plenary Presentation and Q&A Location: 701 A/B Hear from Waterfront Toronto about the project objectives and the criteria against which the proposed Quayside Master innovation and Development Plan will be assessed. Sidewalk Labs staff will then walk you through concept site plans for Quayside highlighting the innovation that makes this neighbourhood unique. A short question and answer session will follow. Then, you will have the chance to take a deeper dive into the topic of your choice during breakout discussion sessions. *Light refreshments will be provided, including coffee, tea, water and cookies. Gluten free and vegan options will be available.*			
3:00 p.m. - 3:10 p.m.	Move to Breakout Rooms - Rotation 1			
	Breakout #1	Breakout #2	Breakout #3	Breakout #4
3:10 p.m. - 4:00 p.m.	**Quayside Site Plan & Transportation** Location: 701 A/B	**Affordable Housing & Social Infrastructure** Location: 703	**Digital Governance** Location: 705	**Sustainability** Location: 707
4:00 p.m. - 4:10 p.m.	Move to Breakout Rooms - Rotation 2			
	Breakout #1	Breakout #2	Breakout #3	Breakout #4
4:10 p.m. - 5:00 p.m.	**Quayside Site Plan & Transportation** Location: 701 A/B Note: this is a repeat session	**Affordable Housing & Social Infrastructure** Location: 703 Note: this is a repeat session	**Digital Governance** Location: 705 Note: this is a repeat session	**Sustainability** Location: 707 Note: this is a repeat session
5:00 p.m.	Roundtable concludes			


SIDEWALK TORONTO
Welcome to
Roundtable 4
DECEMBER 8, 2018
WATERFRONToronto
SIDEWALK LABS


SIDEWALK TORONTO
Sidewalk Labs Approach
Creating Neighbourhoods
2

Sidewalk Labs: Objectives

SIDEWALK TORONTO

SIDE WALK LABS

Establish the world's most innovative urban district

Attract and sustain a diverse twenty-first-century economy, including a cluster focused on urban innovation

Enable a meaningfully superior quality of life for a diverse population of residents, employers, and employees

Provide financial viability for long-term investors

Create a replicable model that can be scaled to cities across multiple geographies

Sidewalk Proprietary and Confidential - Draft

Sidewalk Labs: Why We Are Here

SIDEWALK TORONTO

SIDE WALK LABS

We aim to combine world-class urban design with cutting-edge technology to set new standards for sustainability, affordability, and economic opportunity for Torontonians of all incomes, abilities, and ages.

Sidewalk Toronto will create a new type of inclusive urban community that puts physical, digital, and social innovation to work for a better quality of life.

Sidewalk Proprietary and Confidential - Draft

Quality of Life for All

Community Well-Being

The physical environment is a platform for everyday life and its design plays an important role in supporting community well-being, enhancing quality of life and enabling healthy lifestyles.

Diversity, Equity & Inclusion

Inclusive communities and economic growth require a commitment to values of diversity, equity and inclusion.

Sidewalk Toronto is planning a neighbourhood where all are welcome and have an opportunity to flourish and thrive.

Sidewalk Labs: Role

Essential Catalyst



Foundational & Sustainable Infrastructure

Providing essential infrastructure that the market alone will not yet provide.

Improved Quality of Life Accessible to All

Providing innovative digital services and design principles that enable quality-of-life improvements for Torontonians and Canadians.

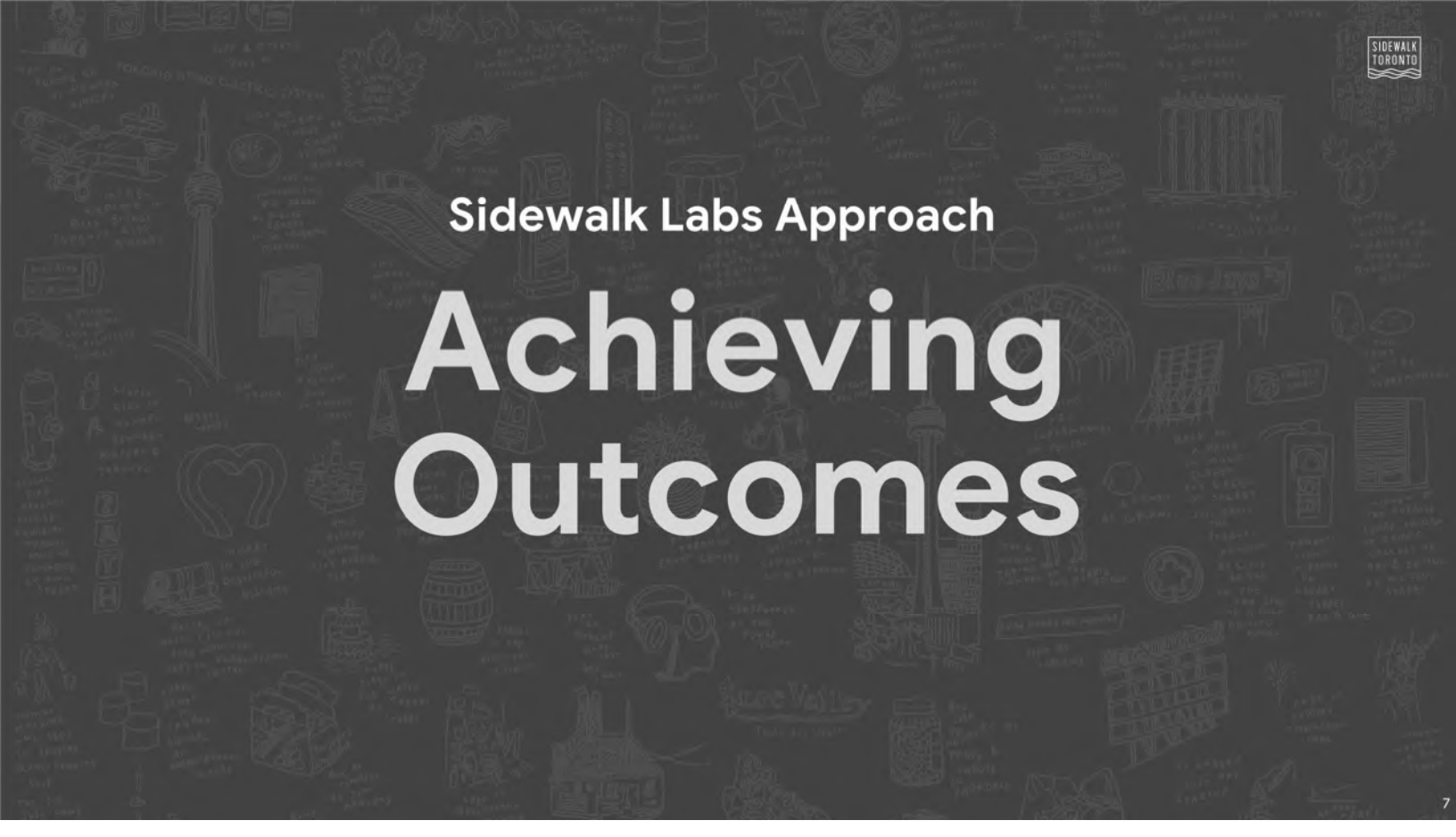
Sustainable Economic Development

Catalyzing new jobs with core anchors and conditions for third-party innovation.

Limited Real Estate Development

Developing real estate in the early phases until ideas are proven out

Sidewalk Proprietary and Confidential | Draft


SIDEWALK TORONTO
Sidewalk Labs Approach
Achieving Outcomes
7

Achieving Outcomes Together

Economic Development

Growth on the Waterfront must support Toronto's need for continued economic success and growth in employment. Spaces that support this and catalysts that drive it are both needed.

More and broader non-residential uses

1



Non-residential Uses

Growing new & nascent Canadian innovation-centered industries

2



Innovative Materials: Tall Timber

3



Innovative Services: Urban Innovation Cluster, Seed Space

New lower-floor typology for micro-enterprises

4



"Stoa" Ground Floor

Bringing together and growing eco-systems

5



Catalytic Uses

Sidewalk Proprietary and Confidential - Draft

Achieving Outcomes Together

A Climate Positive and Sustainable Waterfront

Investment in the technologies and infrastructure to make this happen is necessary and achievable.

Clean energy and smart energy management

1. Thermal Grid
2. Advanced Power Grid
3. Building Construction meeting Toronto Green Standards - Tier 3
4. Autonomous Buildings

Creating greener buildings with new materials and methods

5. Sustainable Construction and Materials



Getting around with fewer emissions

6. Increased transit and active transportation rides



Collecting and managing waste and water more effectively

7. Smart Waste Management



8. Active Water Management



Sidewalk Proprietary and Confidential - Draft

Achieving Outcomes Together

Affordability and Inclusive Communities

Housing affordability continues to worsen and is threatening Toronto's tradition of creating inclusive communities. We need to re-establish this priority.

Exceed affordable targets & expand housing options

1. **20% affordable and Up to 20% middle income**
2. **Significantly more purpose-built rental housing**
3. **New housing options,** including co-living, family housing, shared equity

Reduce construction costs w/ new technology & innovative design

4. 
Factory construction of buildings

5. 
Efficient Units

Design and provide services for all ages and abilities

6. 
Family-supportive design; options to age in place

7. 
Accessible Design

Dedicate spaces for community uses

8. Expanded All-Ages Public Realm

9. Community Facilities; Arts, Health, Education and Civic Engagement spaces



Sidewalk Proprietary and Confidential - Draft

Achieving Outcomes Together

New Mobility

Growth is creating challenges to traditional ways of moving around, but supporting changes in mobility offer opportunities to help people and goods move easily.

Transit-priority and transit-first

1



LRT Expansion

Streets designed to evolve with emerging technologies

2



Dynamic curb design and management

Multi-modal options that rival car ownership

3



Exceptional bike and pedestrian infrastructure

4

Mobility as a Shared Service

New last mile delivery system

5



Freight Consolidation Center

Sidewalk Proprietary and Confidential - Draft

Achieving Outcomes Together

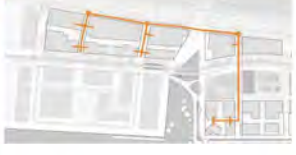
Digital Innovations

Toronto is rapidly becoming a major tech hub, and Canada's long-standing commitment to privacy and civic impact is the foundation upon which new innovation is developing.

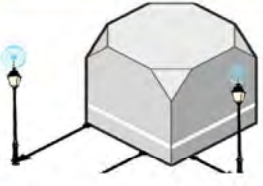
Preserving Privacy and Keeping Data Open

1. 
   Civic Data Trust- external data sharing coupled with robust privacy protection
2. 
   RDIA Process - stringent internal procedures

Ubiquitous Connectivity

3. 
   High-speed personal Wi-Fi networks

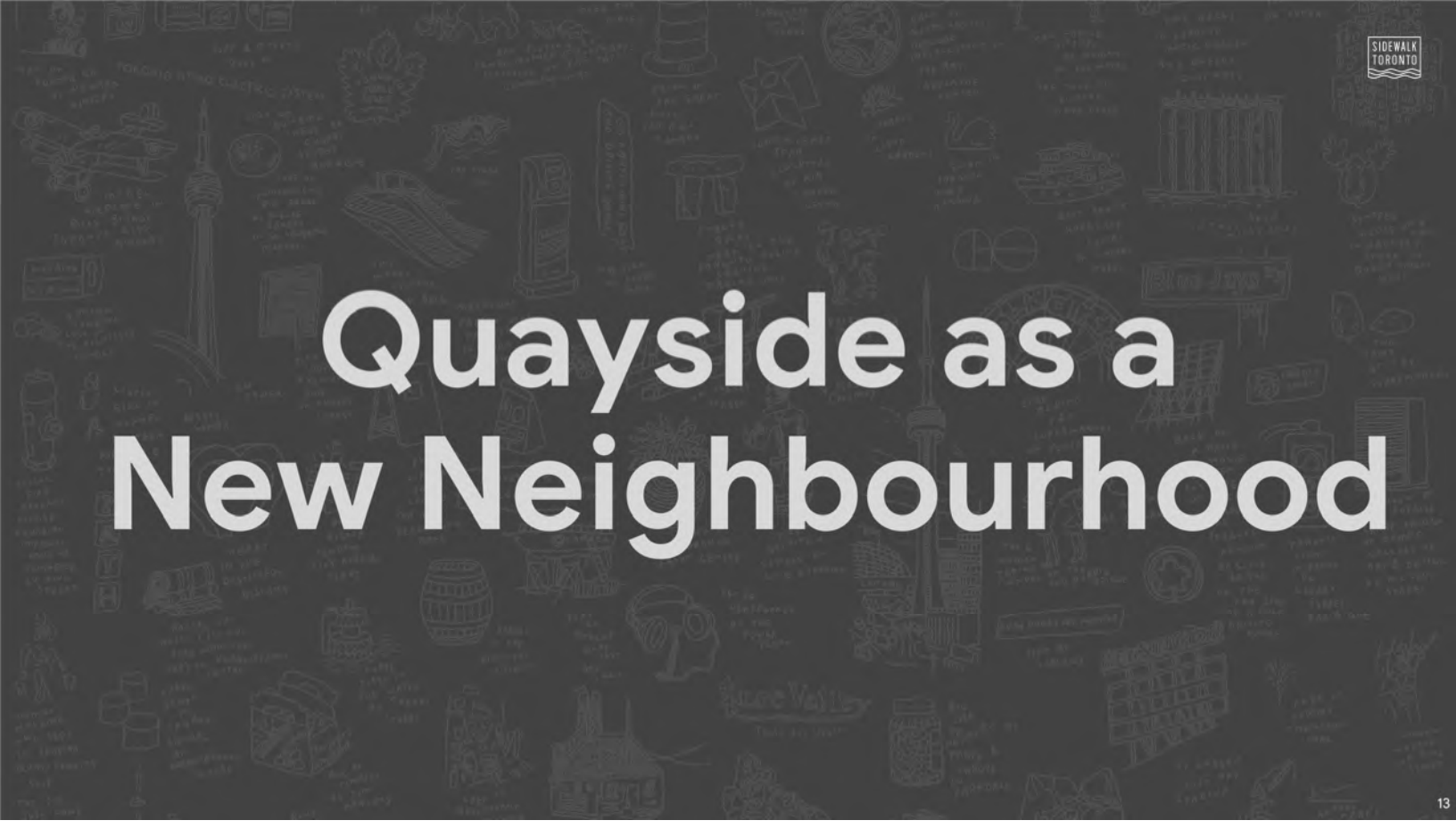
Low-Cost Digital Operations

4. 
   Widespread Digital Infrastructure

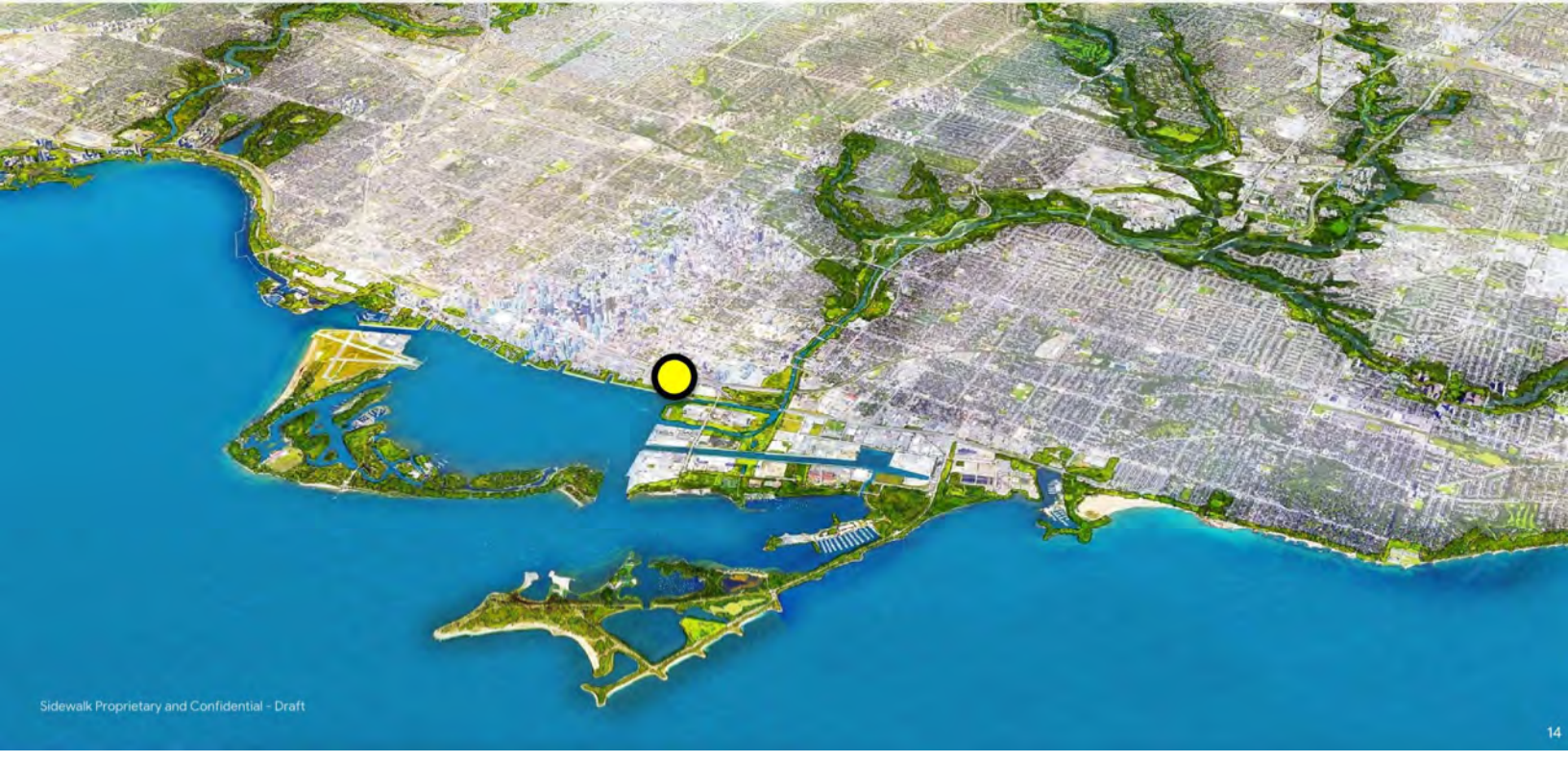
Advanced Urban Simulation

5. 
   Generative Design

Sidewalk Proprietary and Confidential – Draft


SIDEWALK TORONTO
Quayside as a New Neighbourhood
13

Quayside Is a Bridge between Downtown and the East



Sidewalk Proprietary and Confidential - Draft

Quayside Is a Meeting Place for Communities and Nature

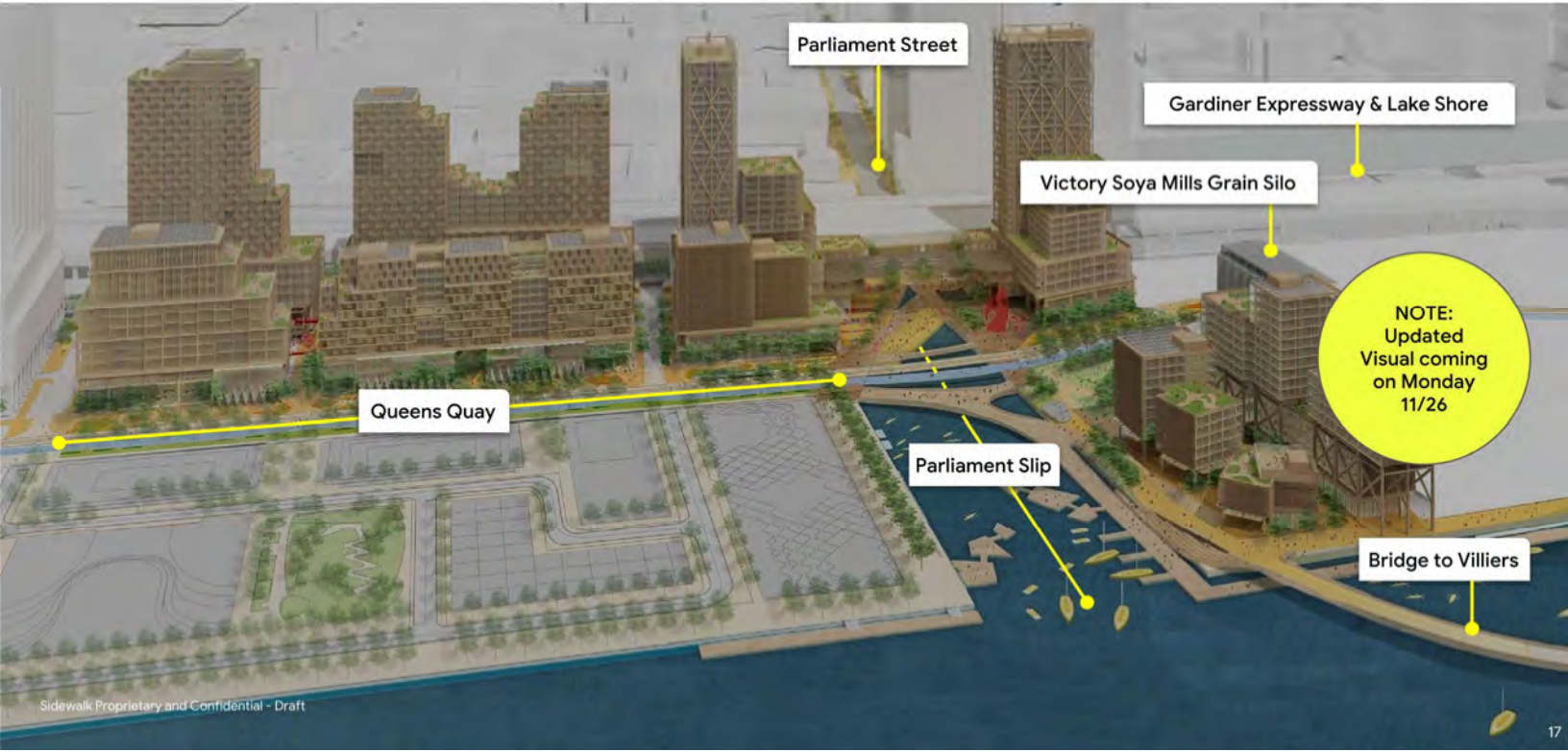


Sidewalk Proprietary and Confidential - Draft

Examples from Around the World



Quayside Concept Plan



Quayside Concept Plan



Confidential - Draft

Quayside Concept Plan

Proposed Program Density
2,983,000 SF



Sidewalk Proprietary and Confidential - Draft

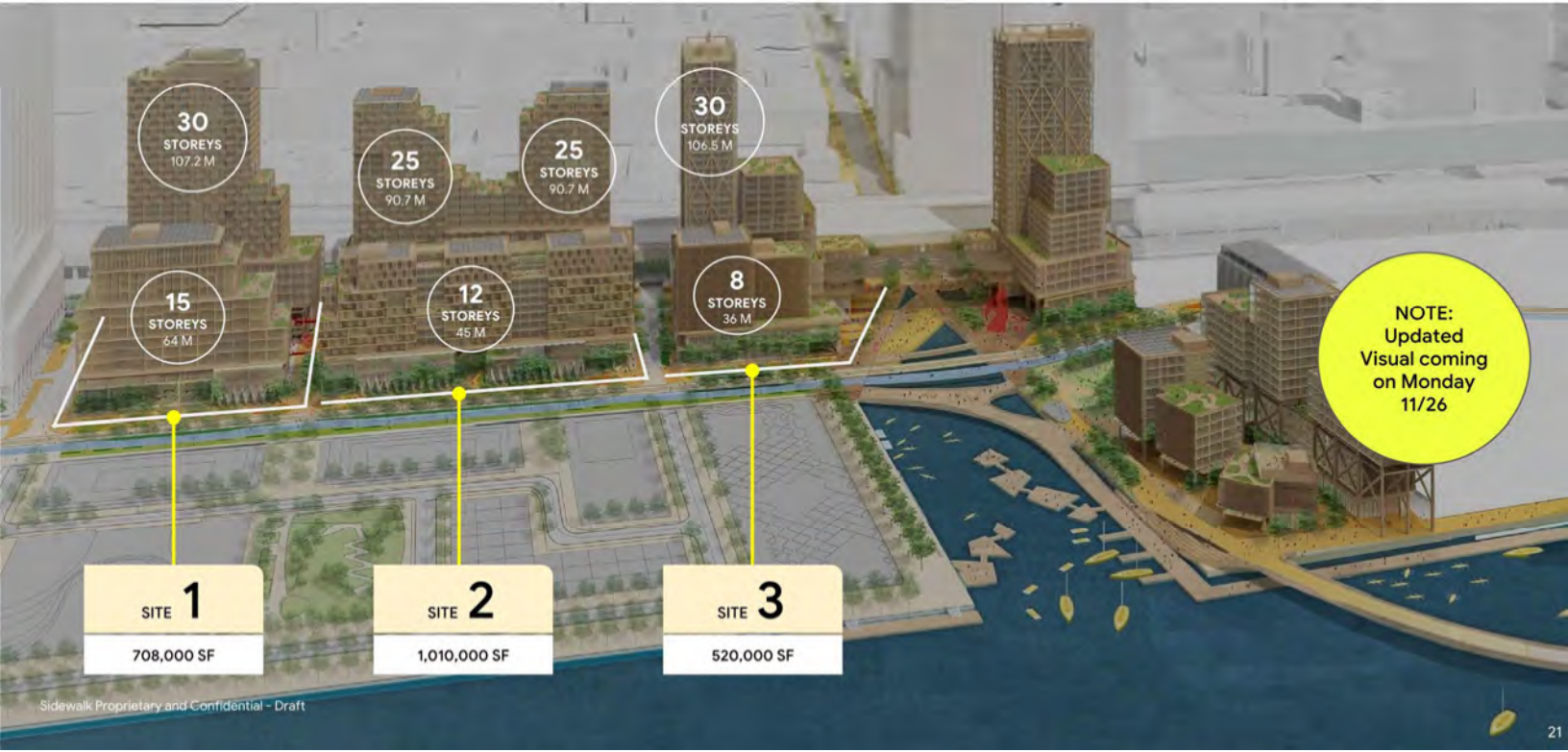
Quayside Concept Plan

Proposed Program Density
2,983,000 SF



Quayside Concept Plan

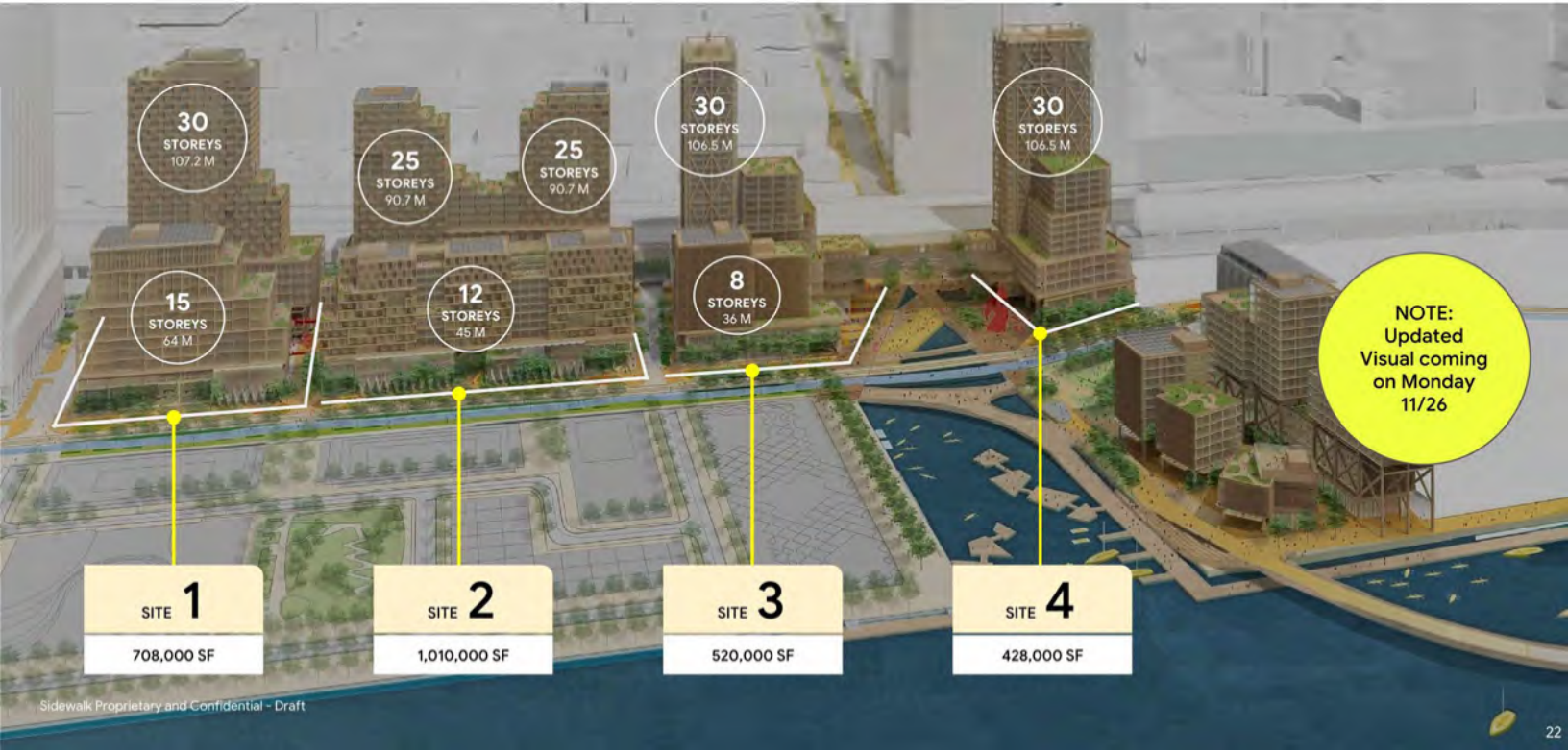
Proposed Program Density
2,983,000 SF



Sidewalk Proprietary and Confidential - Draft

Quayside Concept Plan

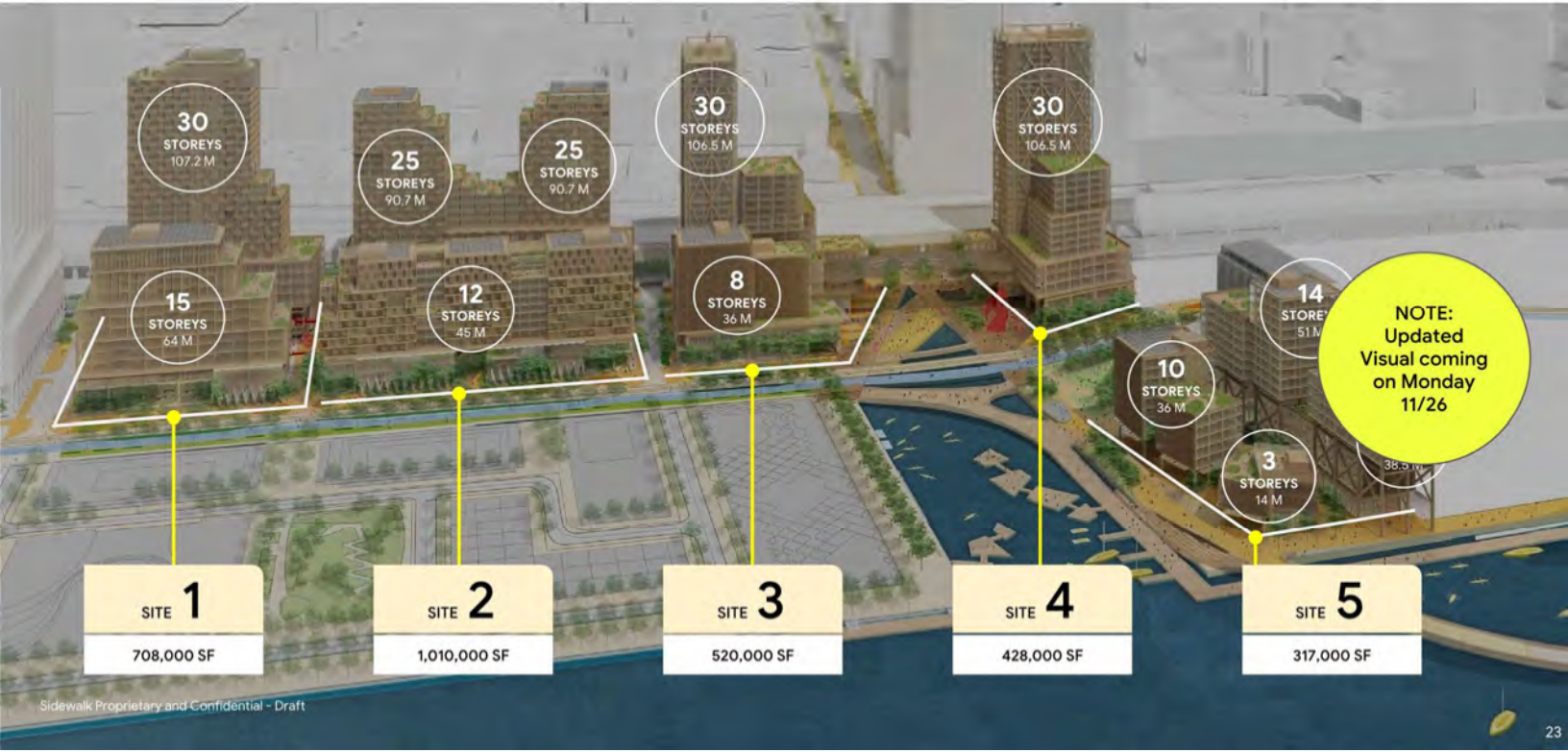
Proposed Program Density
2,983,000 SF



Sidewalk Proprietary and Confidential - Draft

Quayside Concept Plan

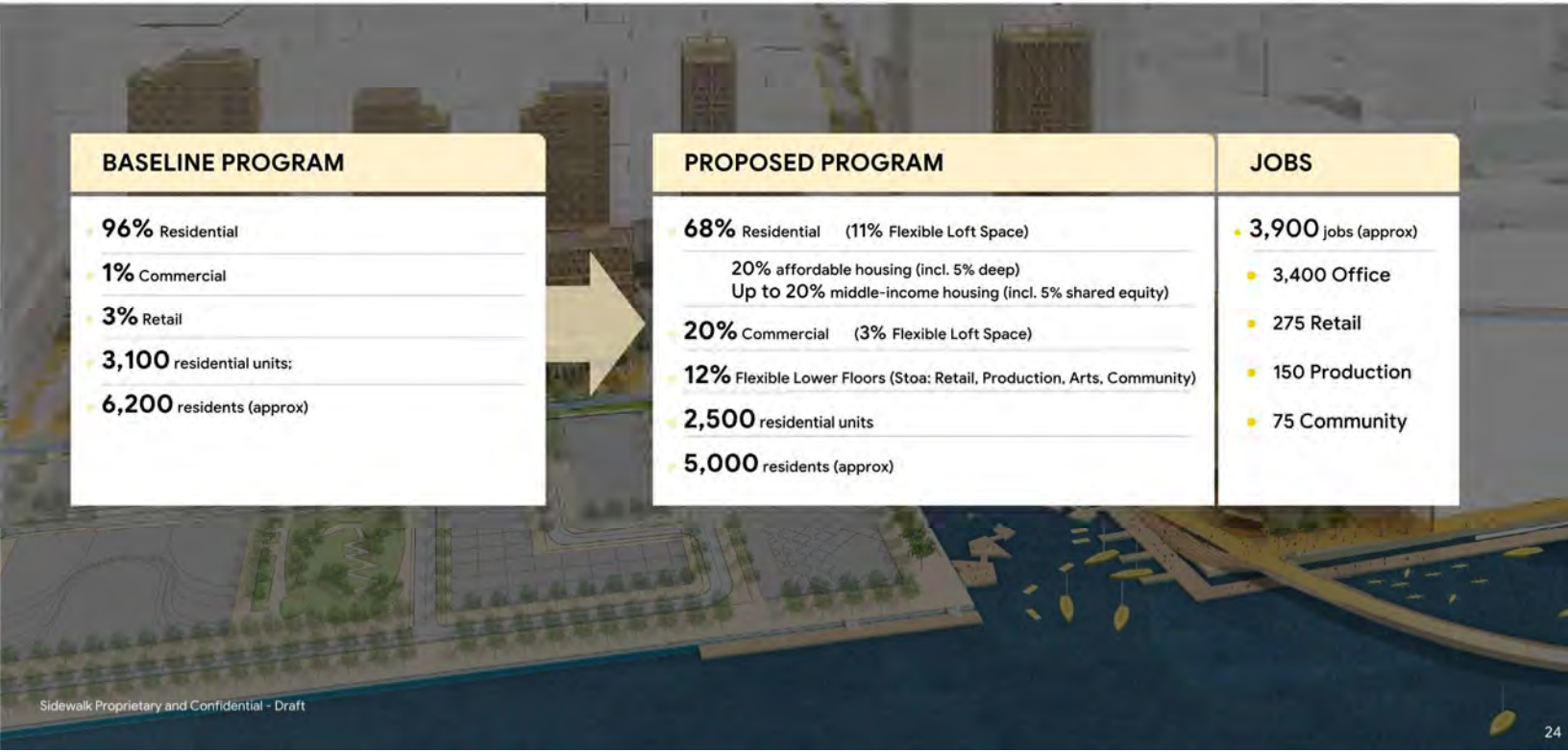
Proposed Program Density
2,983,000 SF



Sidewalk Proprietary and Confidential - Draft

Quayside Program

Proposed Program Density
2,983,000 SF



BASELINE PROGRAM

- **96%** Residential
- **1%** Commercial
- **3%** Retail
- **3,100** residential units;
- **6,200** residents (approx)

PROPOSED PROGRAM

- **68%** Residential (11% Flexible Loft Space)
  - 20% affordable housing (incl. 5% deep)
  - Up to 20% middle-income housing (incl. 5% shared equity)
- **20%** Commercial (3% Flexible Loft Space)
- **12%** Flexible Lower Floors (Stoa: Retail, Production, Arts, Community)
- **2,500** residential units
- **5,000** residents (approx)

JOBS

- **3,900** jobs (approx)
  - 3,400 Office
  - 275 Retail
  - 150 Production
  - 75 Community

Sidewalk Proprietary and Confidential - Draft

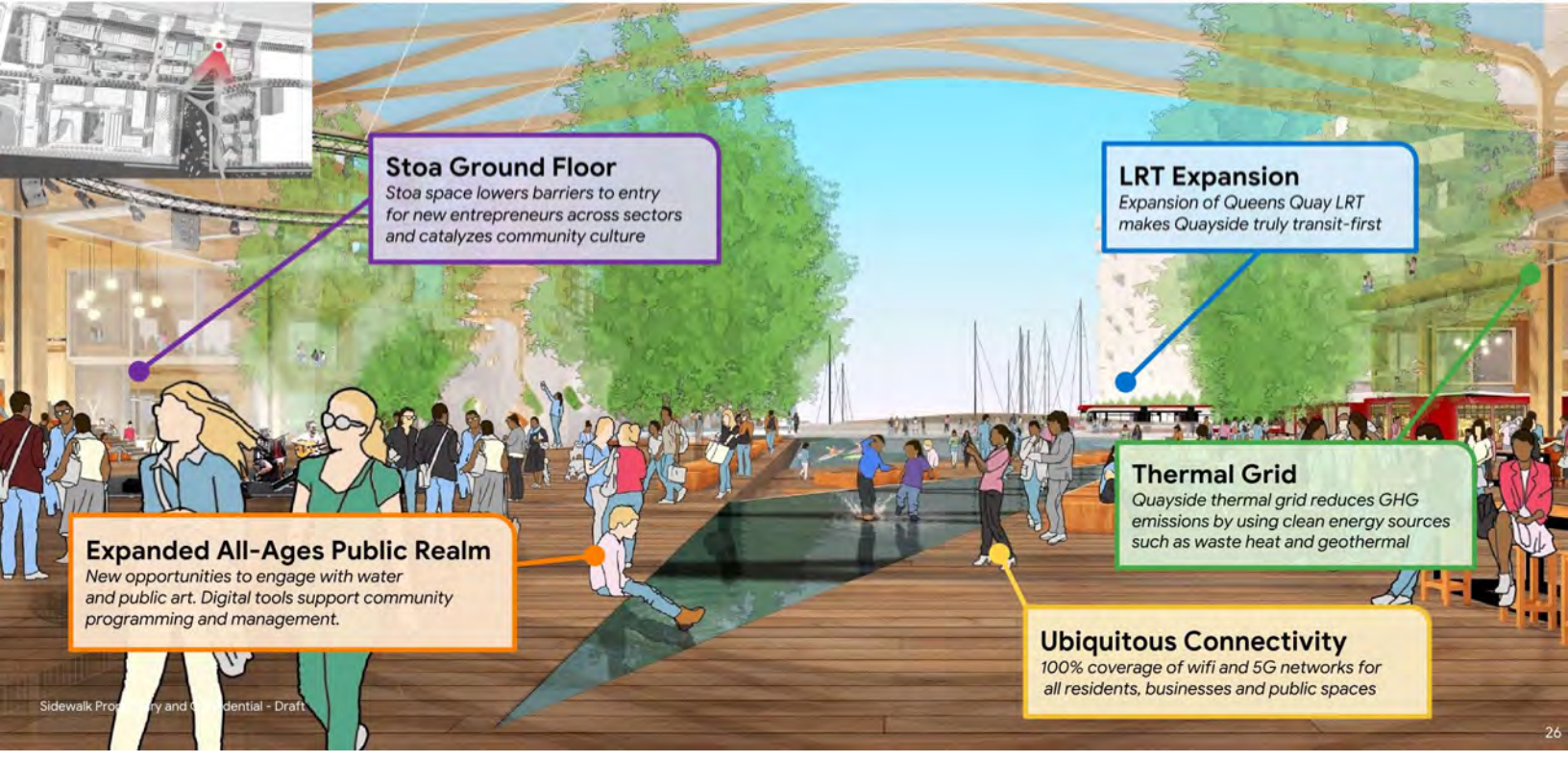
Parliament Plaza

Economic Dev | Climate Positive | Affordability & Inclusivity | New Mobility | Digital Innovations



Parliament Plaza

Economic Dev | Climate Positive | Affordability & Inclusivity | New Mobility | Digital Innovations



Sidewalk Prop[illegible]ry and C[illegible]dential - Draft

Queens Quay

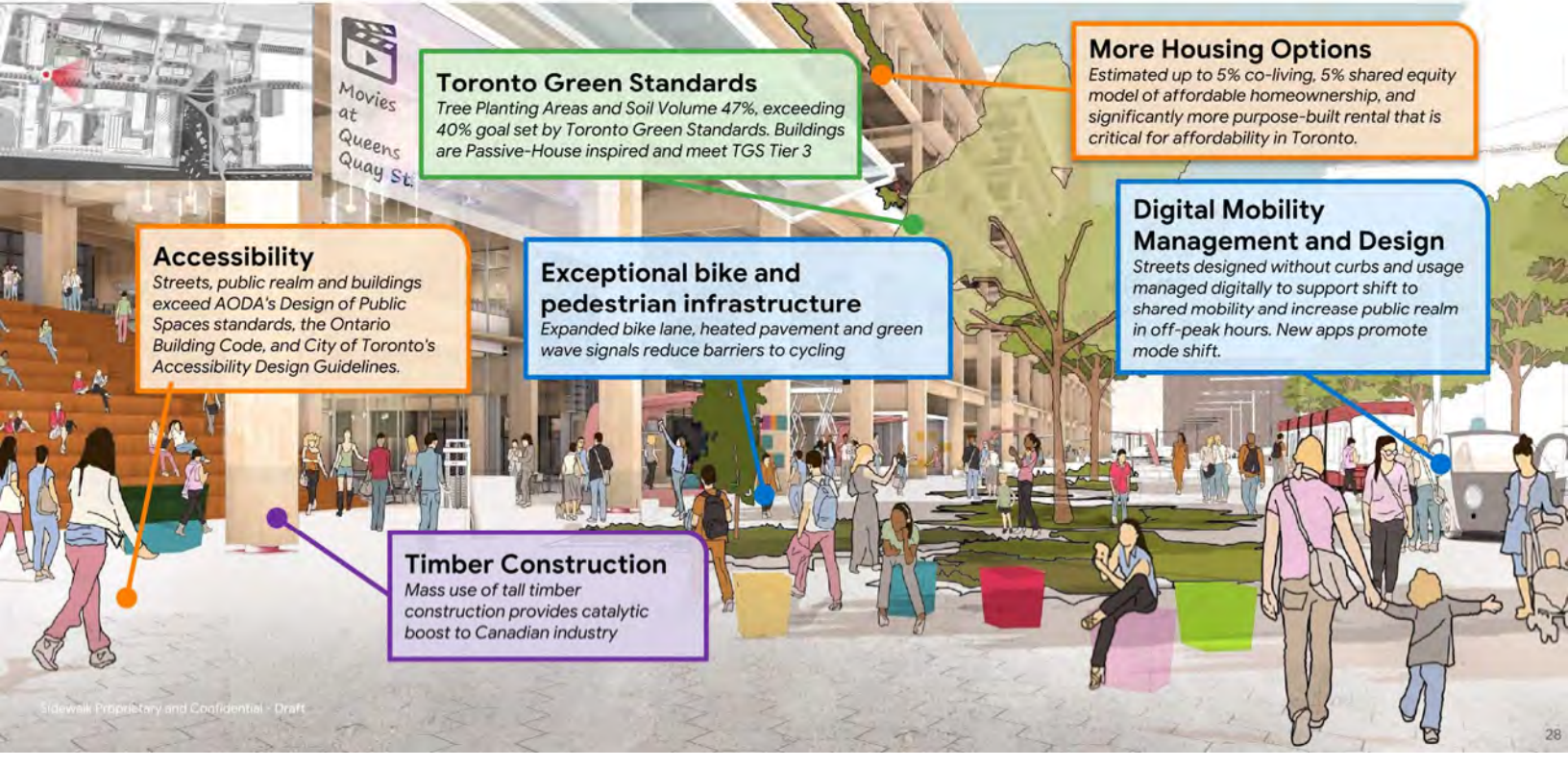
Economic Dev | Climate Positive | Affordability & Inclusivity | New Mobility | Digital Innovations



Sidewalk Proprietary and Confidential - Draft

Queens Quay

Economic Dev | Climate Positive | Affordability & Inclusivity | New Mobility | Digital Innovations



Sidewalk Proprietary and Confidential - Draft

Pedway btw Lake Shore & Queens Quay

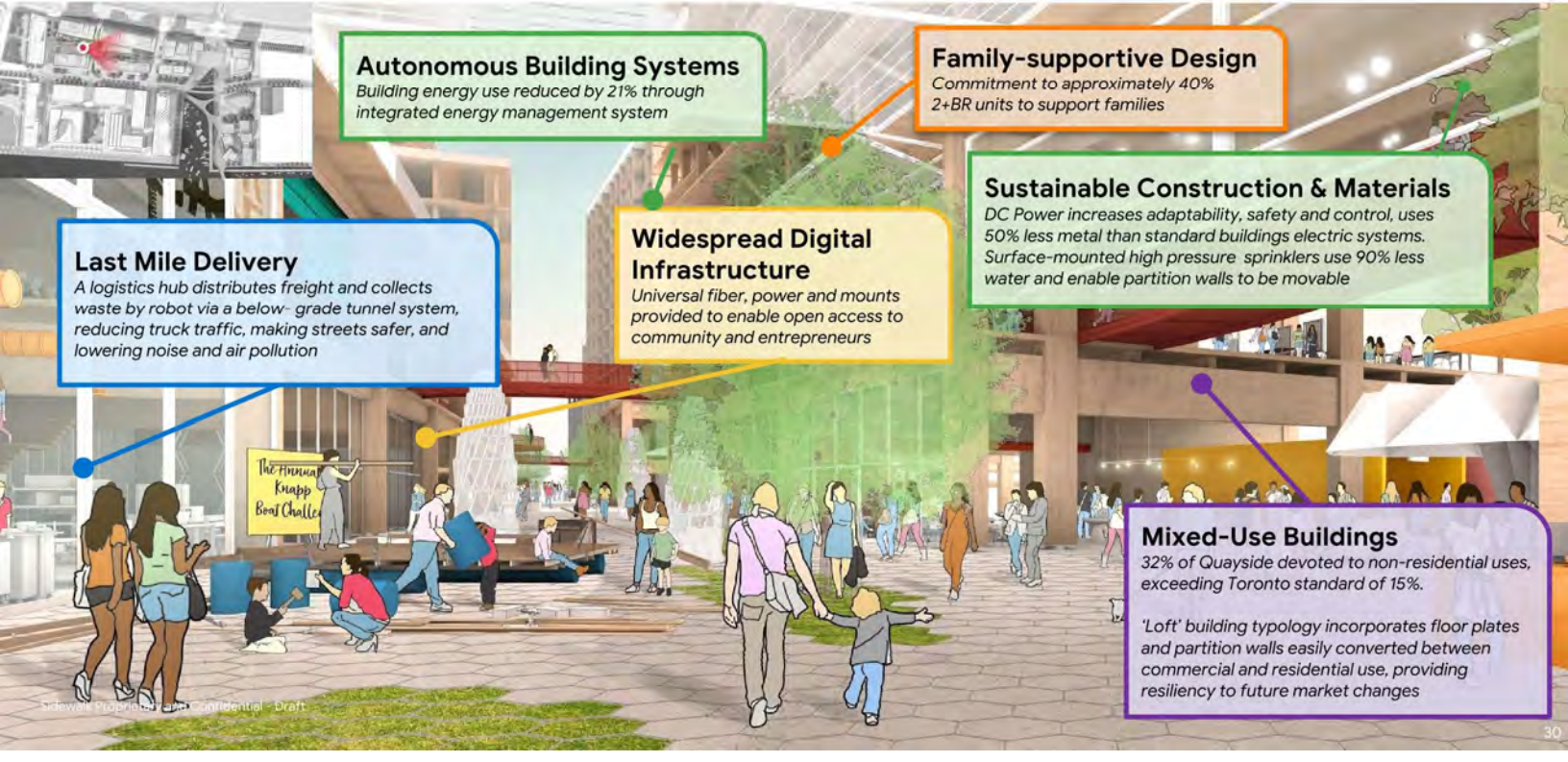
Economic Dev | Climate Positive | Affordability & Inclusivity | New Mobility | Digital Innovations



Sidewalk Proprietary and Confidential - Draft

Pedway btw Lake Shore & Queens Quay

Economic Dev | Climate Positive | Affordability & Inclusivity | New Mobility | Digital Innovations



Sidewalk Proprietary and Confidential - Draft

Parliament Slip

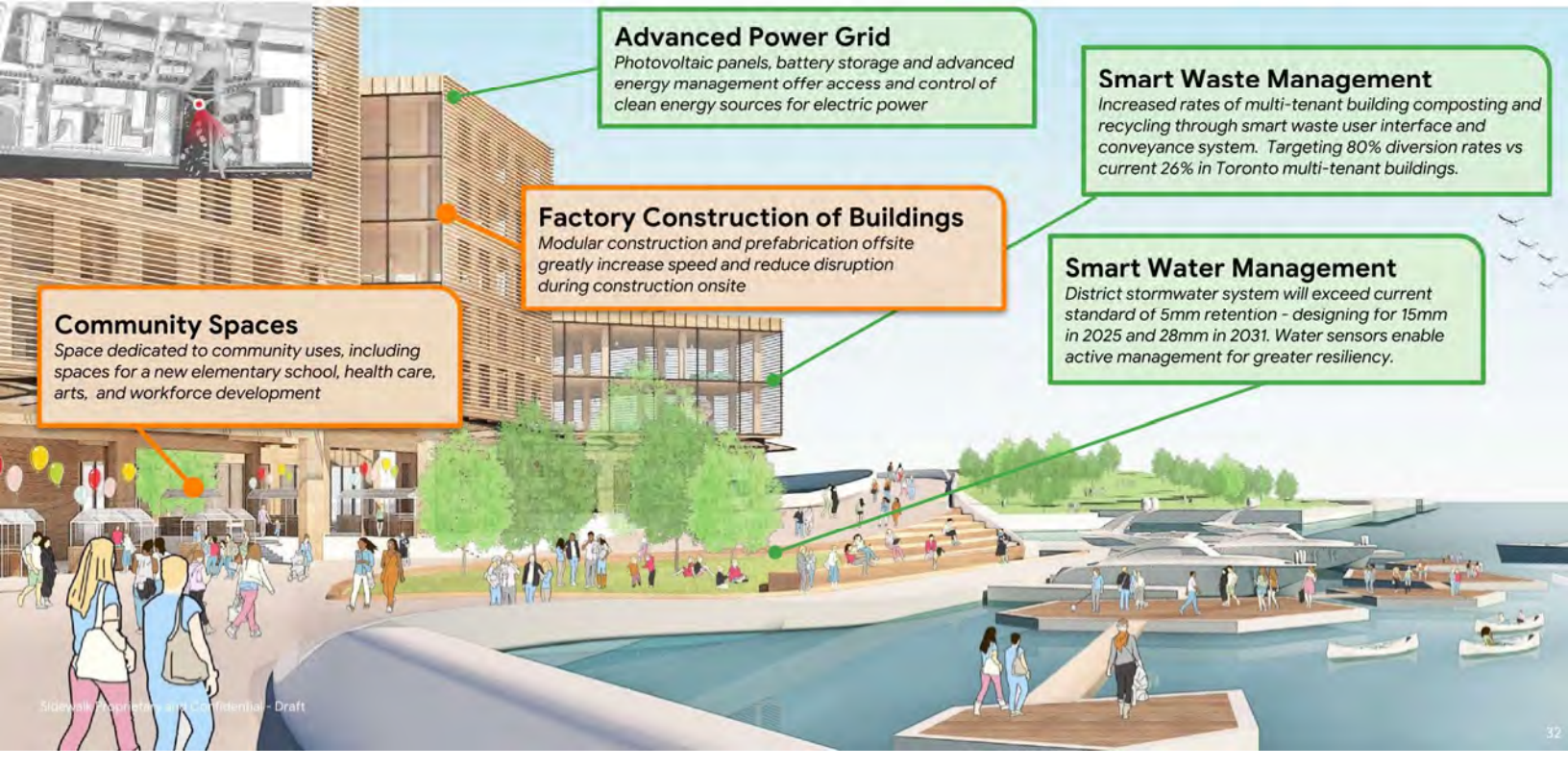
Economic Dev | Climate Positive | Affordability & Inclusivity | New Mobility | Digital Innovations



Sidewalk Proprietary and Confidential - Draft

Parliament Slip

Economic Dev | Climate Positive | Affordability & Inclusivity | New Mobility | Digital Innovations



Sidewalk Proprietary and Confidential - Draft

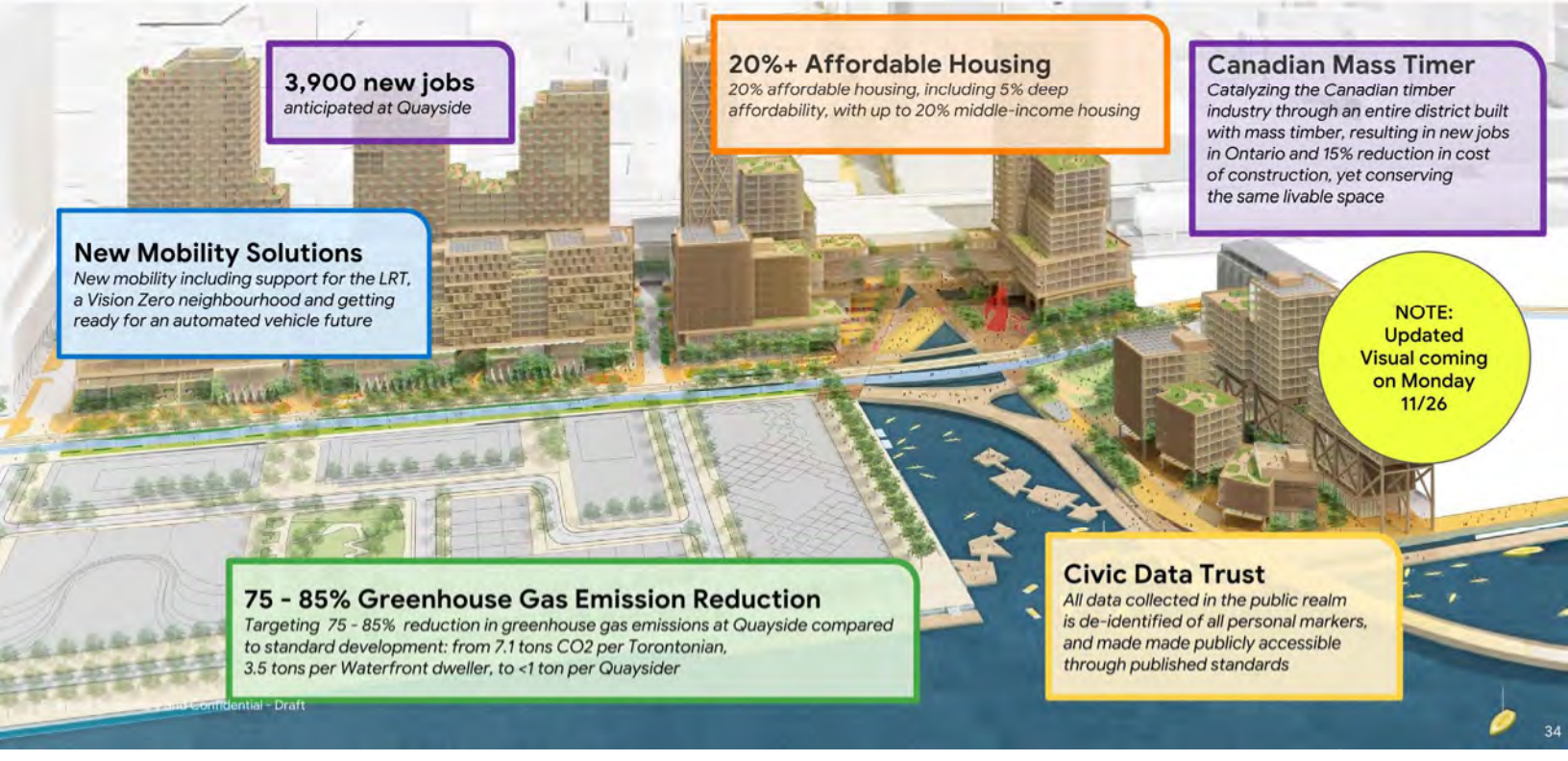
Targeted Outcomes

Economic Dev | Climate Positive | Affordability & Inclusivity | New Mobility | Digital Innovations



Targeted Outcomes

Economic Dev | Climate Positive | Affordability & Inclusivity | New Mobility | Digital Innovations



Confidential - Draft

Breakout Previews

B1 Quayside Site Plan + Transportation

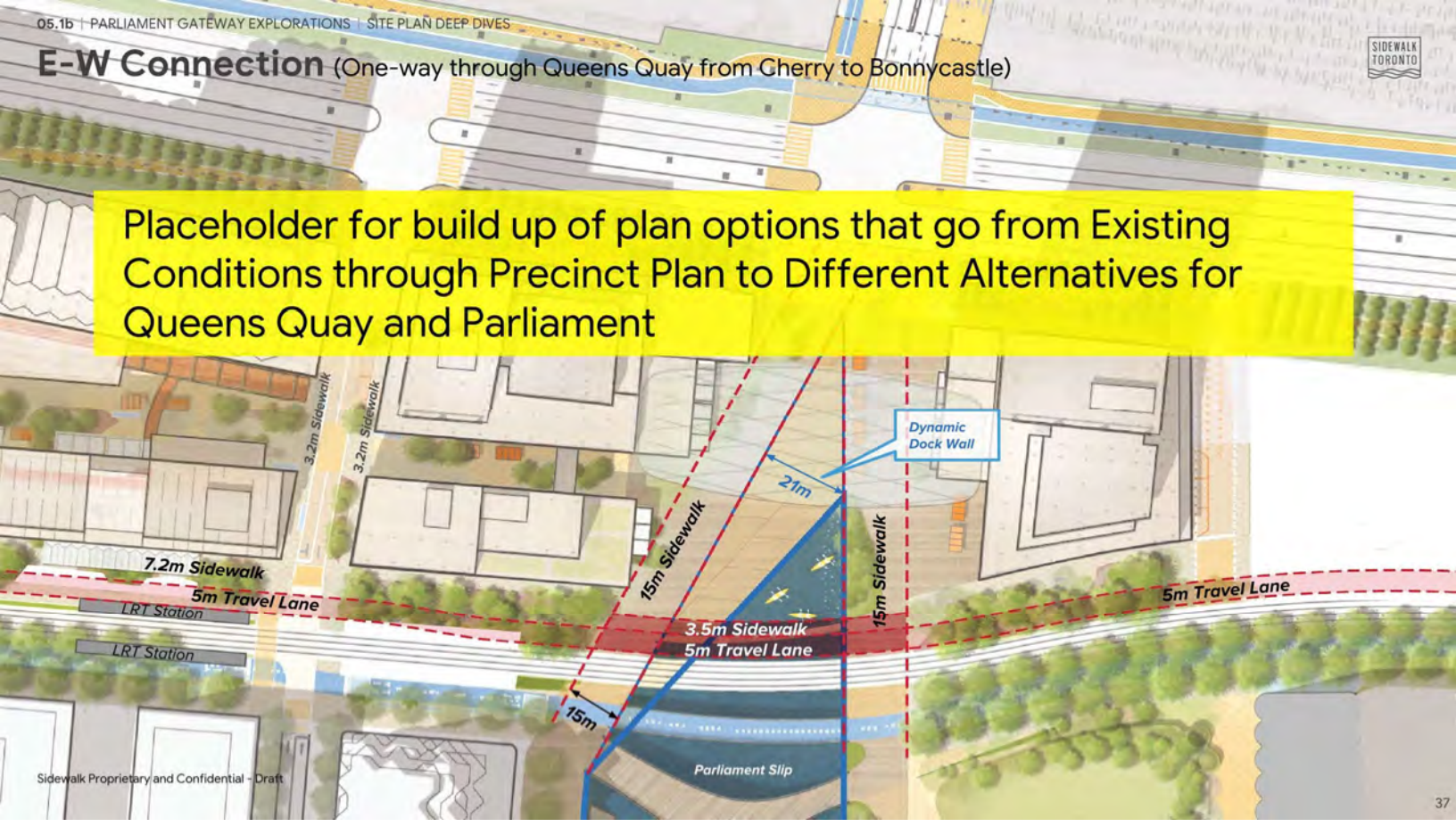
B2 Affordable Housing & Social Infrastructure

B3 Sustainability

B4 Responsible Data Use

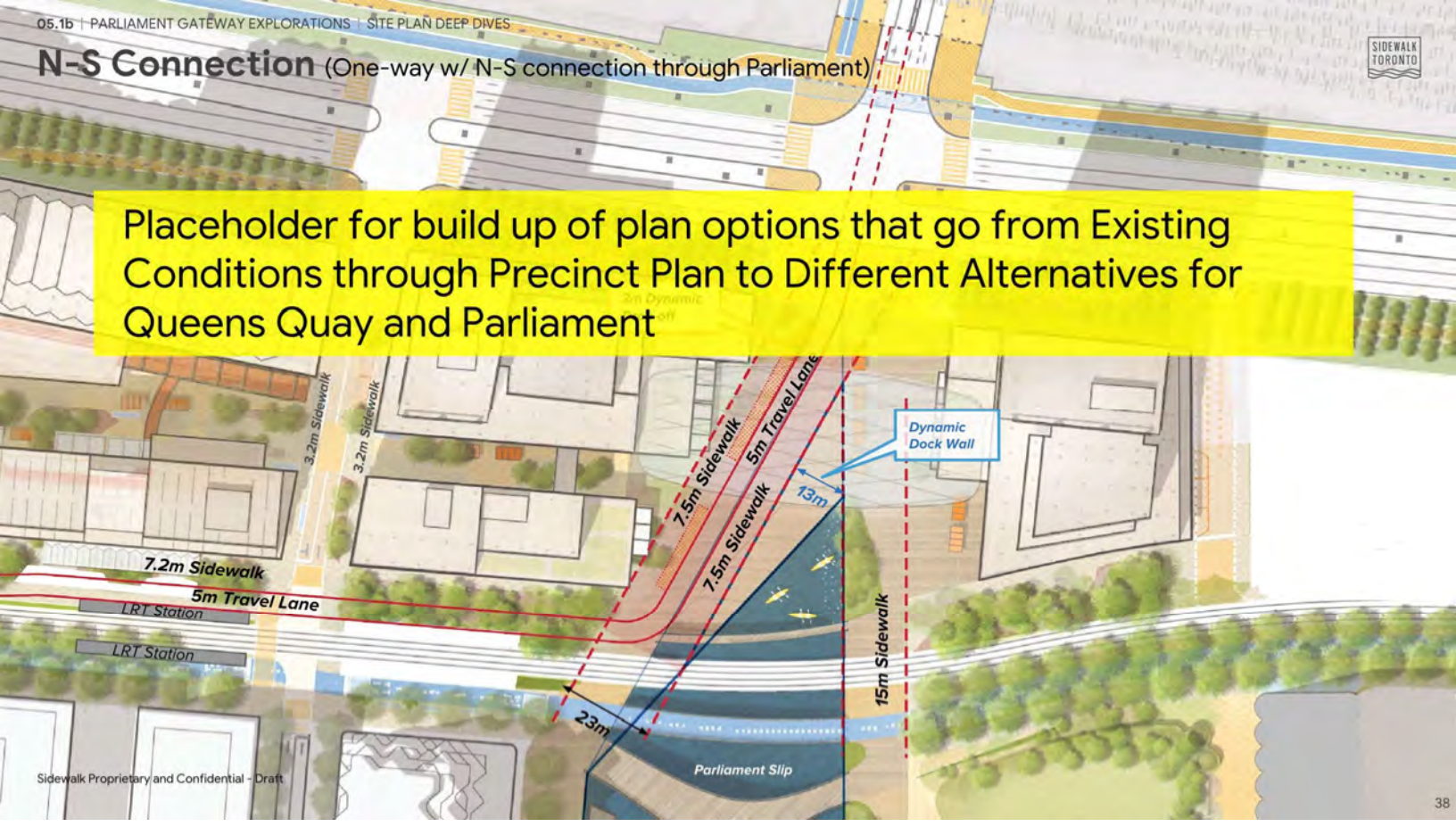

SIDEWALK TORONTO
B1
Breakout Preview
Quayside Site Plan
& Transportation
36

E-W Connection (One-way through Queens Quay from Cherry to Bonnycastle)



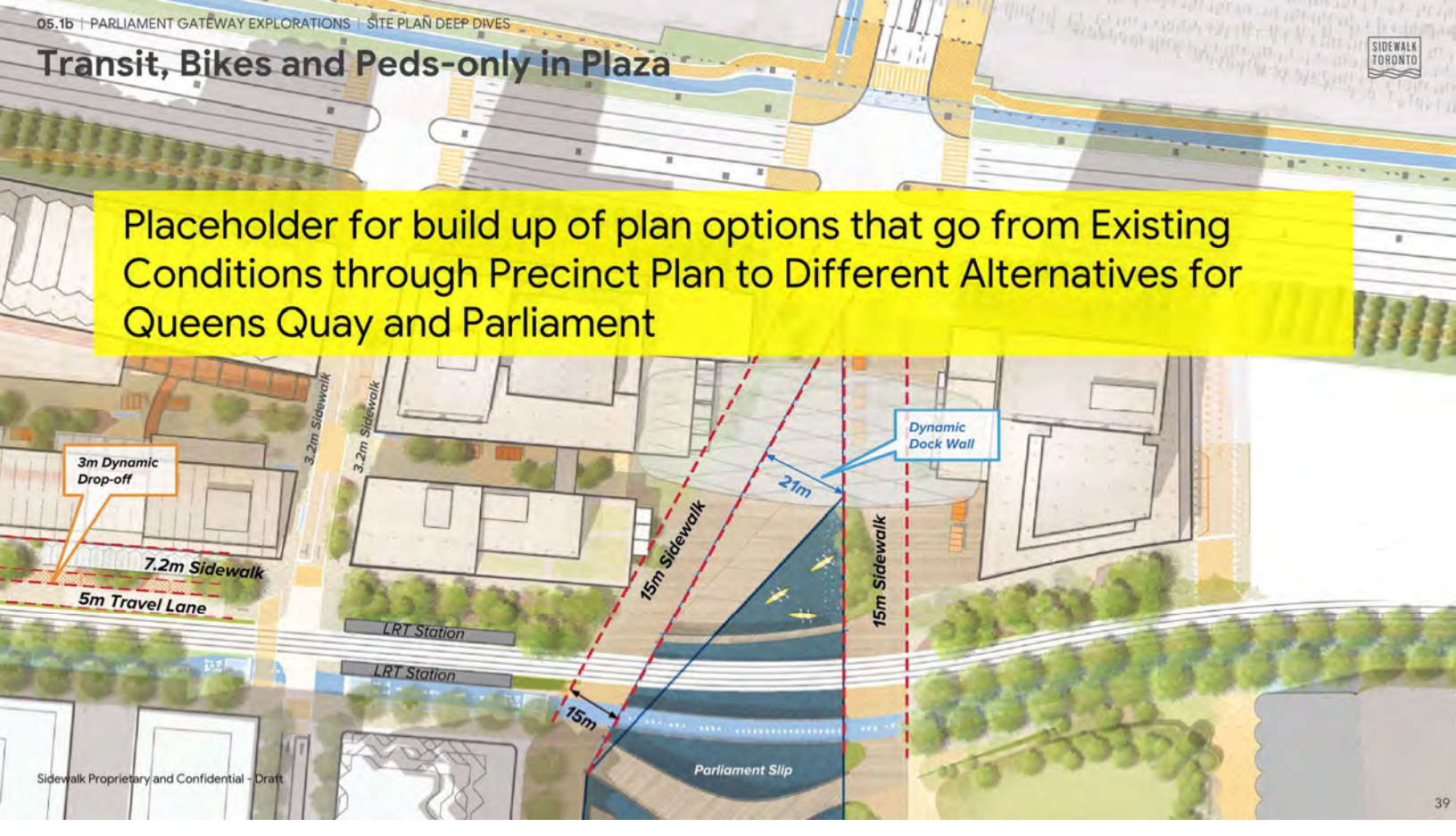
Sidewalk Proprietary and Confidential - Draft

N-S Connection (One-way w/ N-S connection through Parliament)



Sidewalk Proprietary and Confidential - Draft

Transit, Bikes and Peds-only in Plaza



Sidewalk Proprietary and Confidential - Draft


SIDEWALK TORONTO
B2a
Breakout Preview
Housing Affordability
40

Quayside Housing Plan [November 2018 DRAFT]

What We Propose

Deeply Affordable
<80% AMR

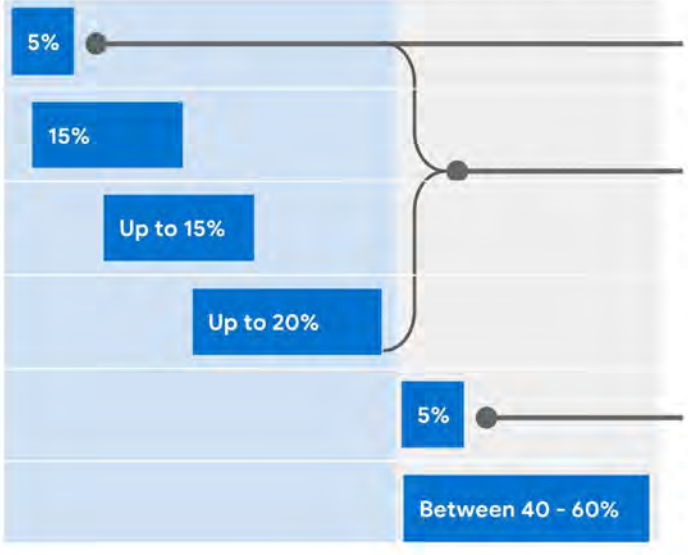
Affordable
80-100% AMR

Middle-Income
100-150% AMR

Market-Rate Rental

Shared Equity
Affordable ownership

Market-Rate Condo



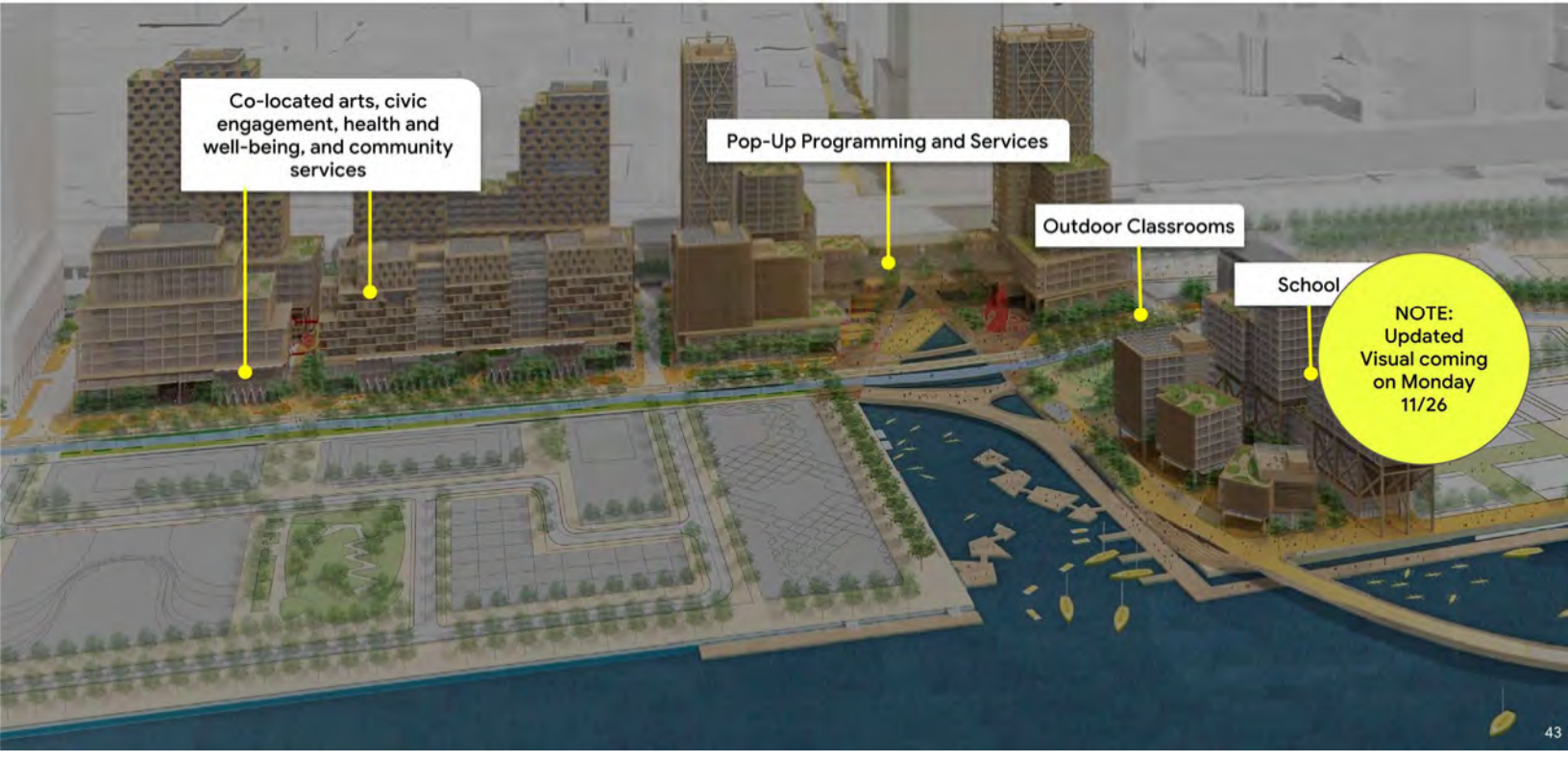
Significant Affordability
Nonprofits will operate and potentially help develop units accessible to special populations

Purpose-Built Rental
Introduction and test-case of greater proportion of purpose-built rental will make case for

Shared Equity / Ownership
New products between rental and ownership increase access to middle-income households to achieve equity upside potential


SIDEWALK TORONTO
B2b
Breakout Preview
Social
Infrastructure
42

Social Infrastructure

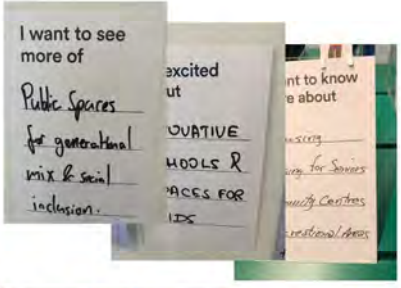


Supporting People to Thrive in Their Everyday Lives

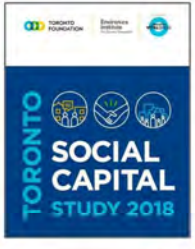
Sidewalk Toronto aspires to be a healthy urban community where all people can thrive and belong throughout their lives.

Social infrastructure is key to this vision.













Vital Signs (Toronto Foundation)

TOCore Community Services & Facilities Plan

City's Youth Engagement Strategy

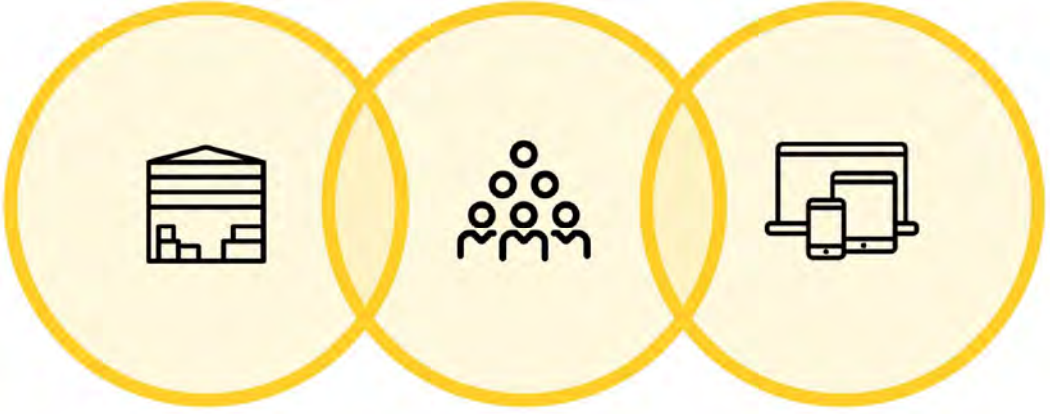
City's Seniors Strategy

Toronto Community Feedback

Photos of feedback cards on the wall at 307

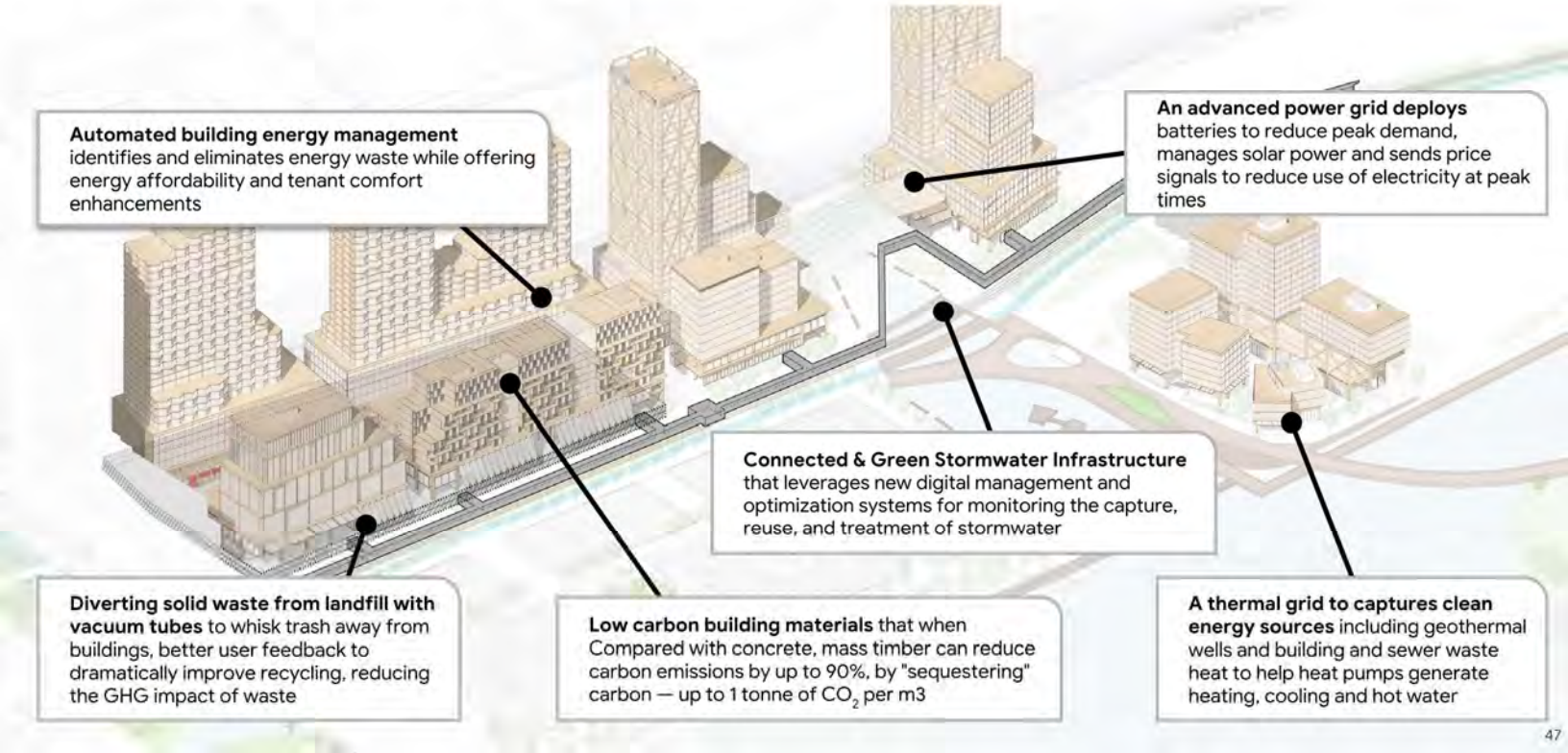
Intentional and Proactive Social Infrastructure Planning

Social infrastructure is comprised of the the physical spaces, programming & services and digital complements that shape our interactions, organize our community, and provide the supports necessary to thrive.




SIDEWALK TORONTO
B3
Breakout Preview
Sustainability
46

Creating a Blueprint Climate Positive Neighbourhood



B4
Breakout Preview

Responsible Data Use

A New Standard for Data & Privacy

The purpose for urban data collection in Sidewalk Toronto is to improve the day-to-day operation of the neighbourhood and to ultimately create a place that's more sustainable, accessible, and responsive to local needs. Four Key Components of Responsible Data Use

Civic Data Trust

An independent entity to control, manage, and make publicly accessible all data that could reasonably be considered a public asset, and a set of rules that would apply to all entities operating in Quayside, including Sidewalk Lab. With the Data Trust, we move away from entities, including Sidewalk Labs, solely owning and controlling these assets.

RDIA

Responsible Data Impact Assessment

Publicly auditable assessment for all public and private digital services required before data is collected and used.

A New Global Standard for the Use of Urban Data

Sidewalk's proposed approach to digital governance in Quayside will demonstrate to Toronto, Canada, and the rest of the world that cities do not need to sacrifice their values of inclusion and privacy for opportunity in the digital age.

Open Standards

Sidewalk will base its technology on open standards, making it easy for others to build and connect new services, offer competitive alternatives, and drive innovation; the Data Trust might consider encouraging or requiring open standards, as well.

RDU Guidelines

Responsible Data Use Guidelines

Application of the guidelines to all parties in Quayside, not just Sidewalk Labs, to put personal privacy and the public good first, while fostering innovation.

Three Example Use Cases for Us to Discuss

1

Transportation

To reduce congestion, increase safety
across all modes of transportation



2

Building Efficiency

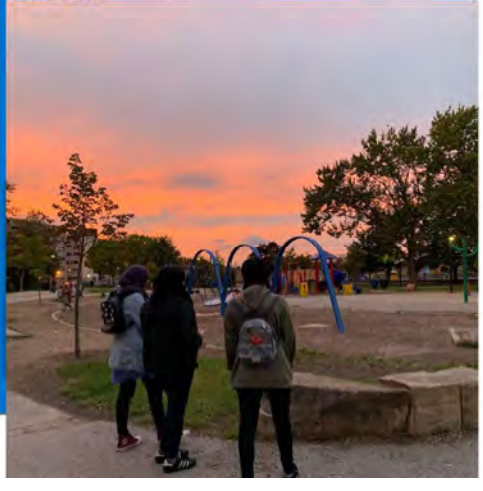
To achieve climate positive,
and create more comfortable living
and working spaces



3

Public Life

To create vibrant, well-managed public spaces that meet community needs



Digital Innovation & Data Governance

MASTER INNOVATION AND DEVELOPMENT PLAN BRIEFING
FOR ASSISTANT DEPUTY MINISTERS

ALYSSA HARVEY DAWSON | CRAIG NEVILL-MANNING | MARCH 5, 2019

Overview

Outline of this presentation

SIDEWALK LABS

We'd like to give you an overview of the Digital Innovation & Data Governance chapter of the Master Innovation and Development Plan.

Because we're discussing this out of the context of the earlier chapters that focus on quality of life goals, we will briefly summarize some of these goals.

We will also describe one set of technologies designed to improve mobility, in order to motivate the technologies and processes we are proposing.

Draft for discussion purposes only

Overview

Outline of this presentation

Current draft chapter outline:

1. More Affordable and Flexible Digital Infrastructure
   Ubiquitous connectivity, "urban USB port", distributed credentials

2. Data Standards That Are Open and Secure
   Data formats, APIs, open access, open source interfaces, resiliency, security, data residency

3. Creating a Trusted Process for Responsible Data Use
   Urban Data Collective, Responsible Data Use Guidelines and Assessment

4. Core Digital Services That Others Can Build On
   Systems to support management of mobility, outdoor comfort, flexible retail, public realm maintenance, open space use, mixed-use buildings, energy, building waste, stormwater

Draft for discussion purposes only

Overview

Principles

No tech for tech's sake

The goal of this project is not to develop digital technology or gather data – it's to improve quality of life in cities. We're not proposing any digital infrastructure or use of data that's not required to achieve quality-of-life goals.

Catalyze innovation by others

Anyone should be able to participate in creating any part of the neighbourhood's infrastructure, services and applications – and it should be significantly easier here compared to existing cities. No vendor lock-in – including for Sidewalk Labs.

Gather and use data responsibly

No data for data's sake: building on Privacy by Design, only gather data when it's required for quality-of-life goals.
An independent Urban Data Collective should develop and implement guidelines and assessments for data gathering and use.

Push the envelope

As long as the principles above are satisfied, buy or build technology that will most significantly, safely and cost-effectively improve quality of life.

Draft for discussion purposes only

Quality-of-life goals

A MOBILITY system that is more convenient than the private automobile

SIDEWALK LABS

Goals

Reduce congestion

Increase safety

Adapt to new forms of transport from self-driving cars to scooters

Personal Rapid Transit

Responsive Traffic Signals

Possible data required:

Location of streetcars

Current availability of curb space

Volume of pedestrians, cyclists, vehicles

How long do people have to wait to cross the street?

Real-time alerts to autonomous vehicles of pedestrians and cyclists around the corner



Draft for discussion purposes only

For illustrative purposes

Quality-of-life goals

A new standard of SUSTAINABILITY

SIDEWALK LABS

Goals

75% per capita greenhouse gas reduction

Reducing building energy demands

Better management of stormwater

Extensive green infrastructure

80% waste diversion from landfills

Possible data required:

Energy use

Heating and cooling effectiveness

Water quality

Air Quality

Flow rates through stormwater, water and sewer pipes

Waste volume in public trash cans

Recycling rates



For illustrative purposes

Draft for discussion purposes only

Quality-of-life goals

A PUBLIC REALM that serves as the city's living room

SIDEWALK LABS

Goals

Streets That Put People First

Mixed-Use Built Environment

Flexible Public Space, Retail, Cultural and Community Amenities

Outdoor comfort

Possible data required:

Which parks are used most heavily?

Which retail spaces are available?

Which trash cans need to be emptied?

Are there any tree limbs down after a storm?

Hyperlocal weather

Decibel levels



For illustrative purposes

Draft for discussion purposes only

Quality-of-life goals

A BUILT ENVIRONMENT that is more usable, efficient and affordable

SIDEWALK LABS

Goals

Enable mixed-use buildings

New construction methodologies that are cheaper and greener

Buildings that achieve energy use, climate, and other goals

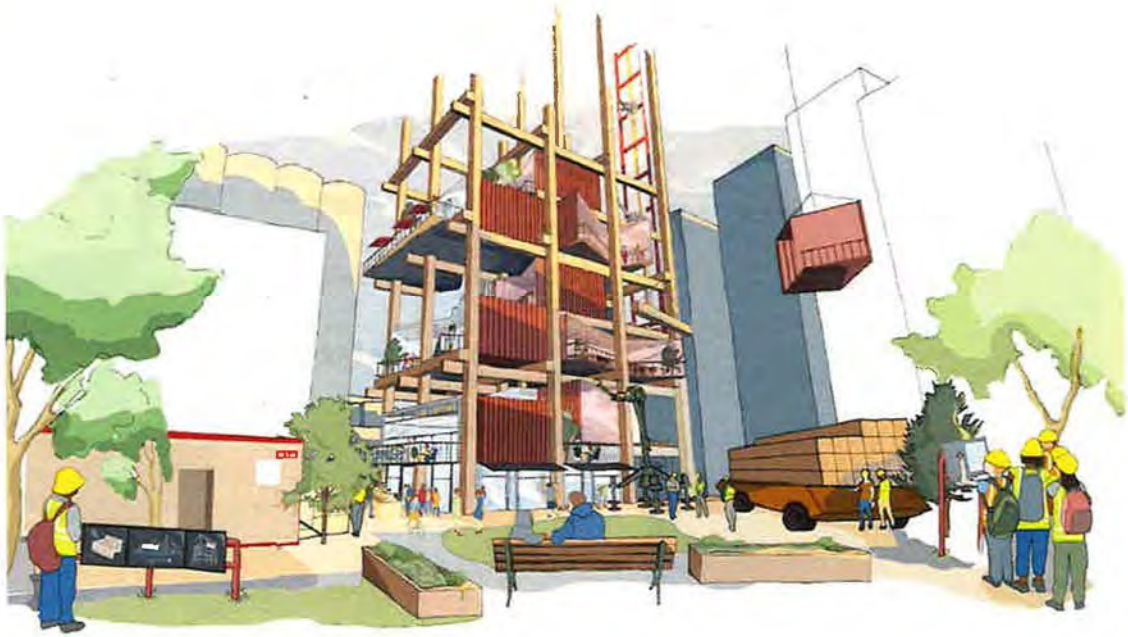
Possible data required:

Indoor air quality

Smoke sensors

Vibration, noise, odor sensors around light industrial uses

Water leak detection



For illustrative purposes

Draft for discussion purposes only

Overview

Mobility: Dynamic Curb

SIDEWALK LABS

To motivate the digital infrastructure and data use, let's look in depth at one specific example.

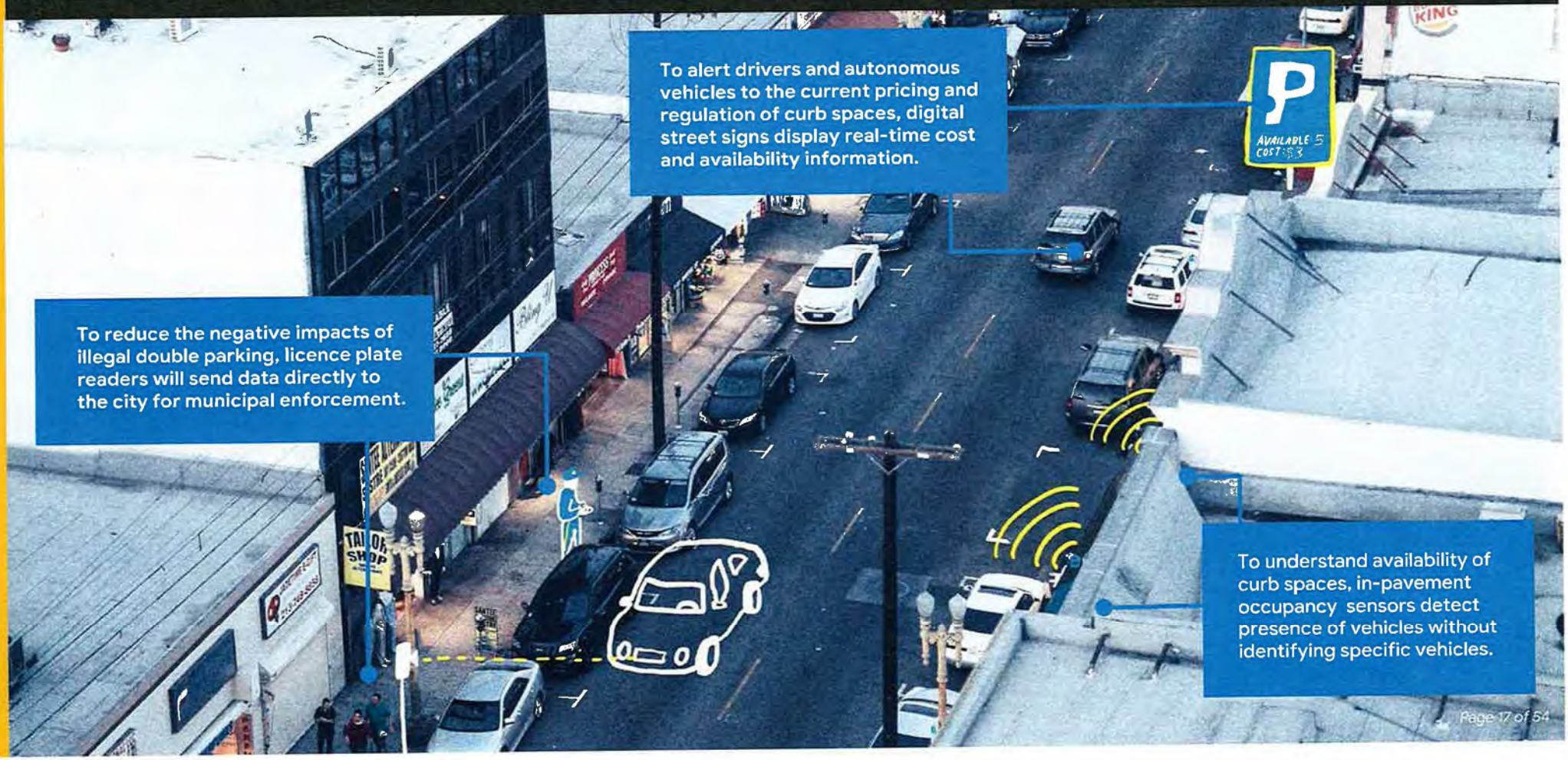
Note, it's one example of many in our proposal – this is purely for the purposes of concreteness.

Draft for discussion purposes only

Quality of life goals

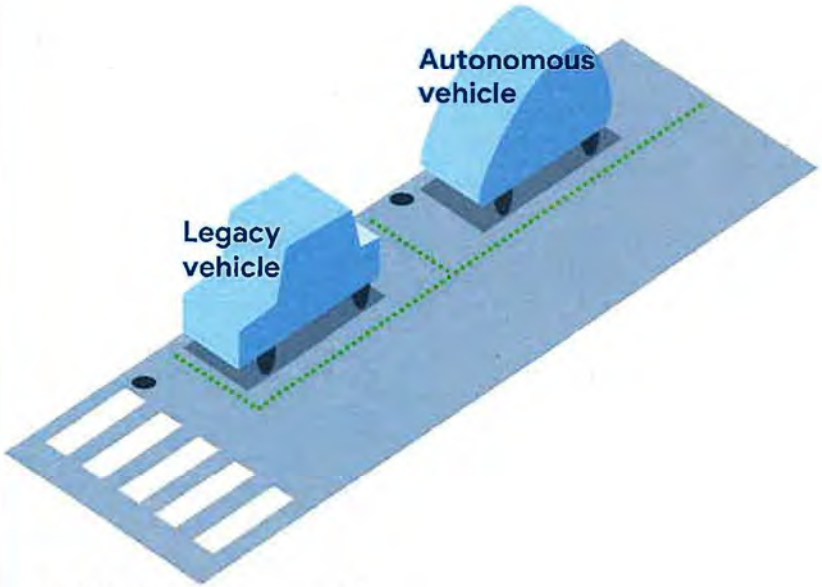
Reduce congestion, increase safety at curbs

SIDEWALK LABS



Quality-of-life goals

Mobility: Dynamic Curb

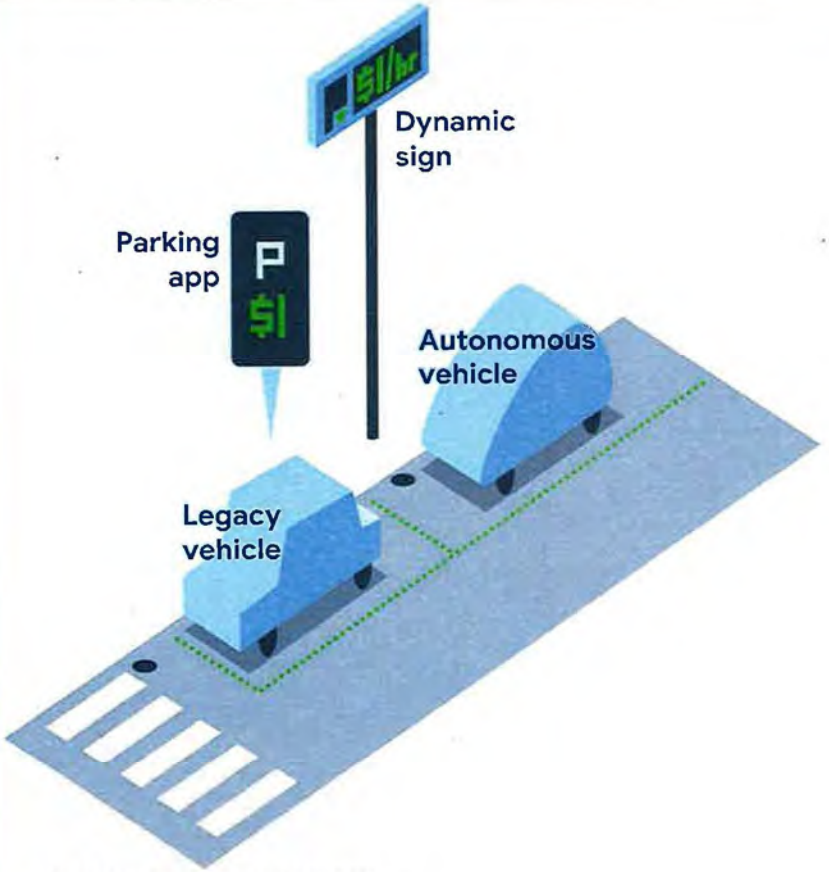


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For illustrative purposes

Quality-of-life goals

Mobility: Dynamic Curb

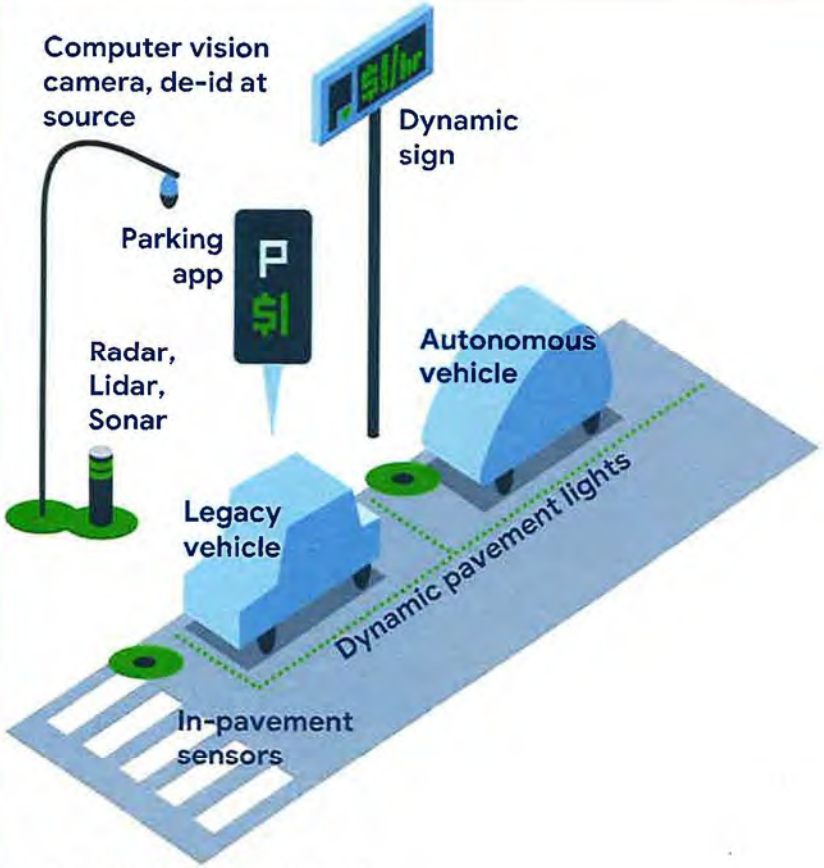


Draft for discussion purposes only

For illustrative purposes

Quality-of-life goals

Mobility: Dynamic Curb

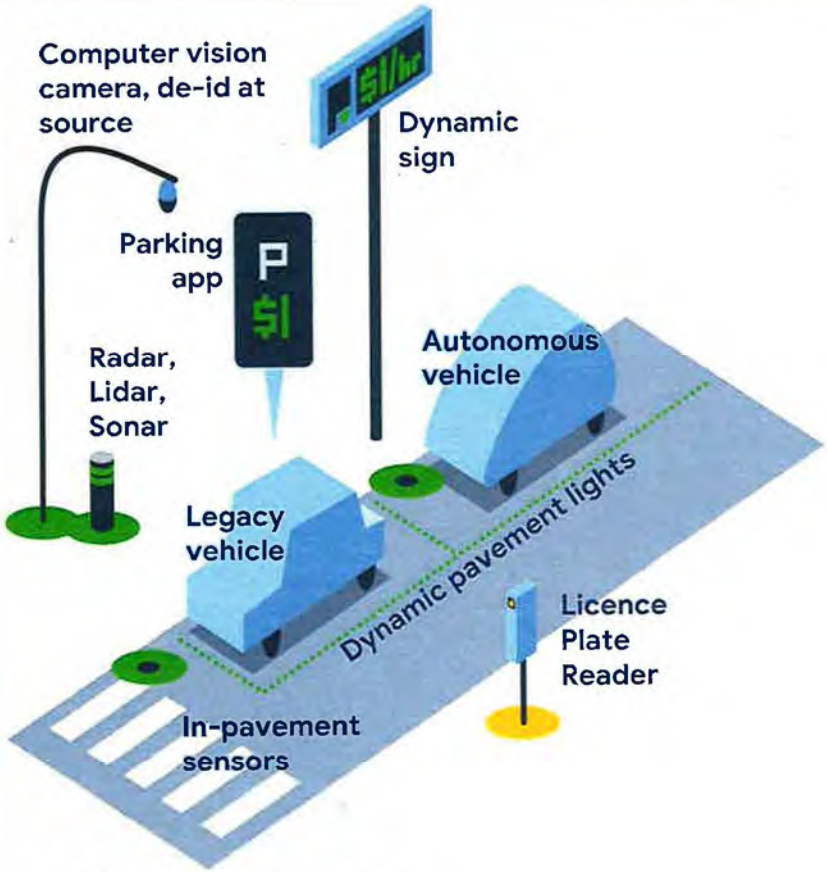


Draft for discussion purposes only

For illustrative purposes

Quality-of-life goals

Mobility: Dynamic Curb

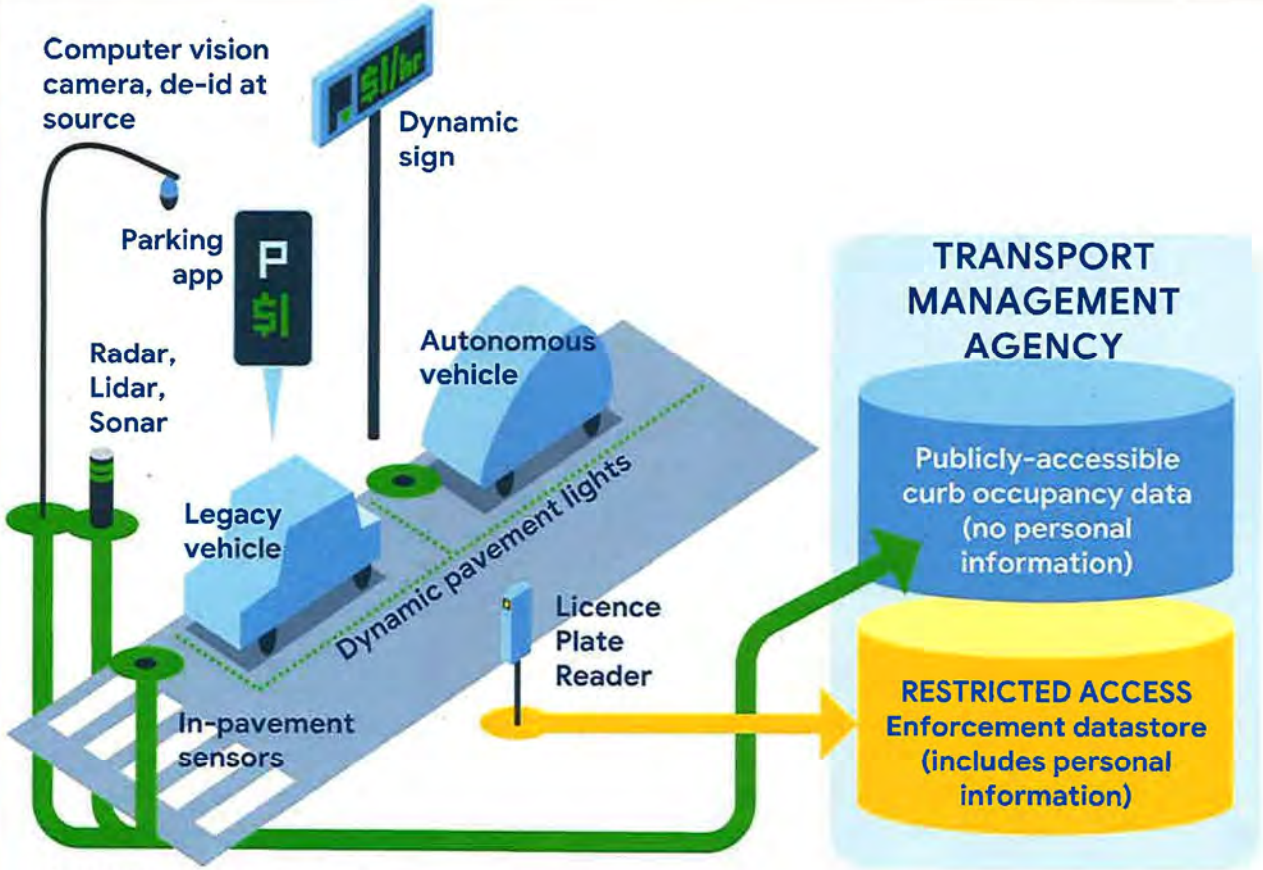


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Quality-of-life goals

Mobility: Dynamic Curb

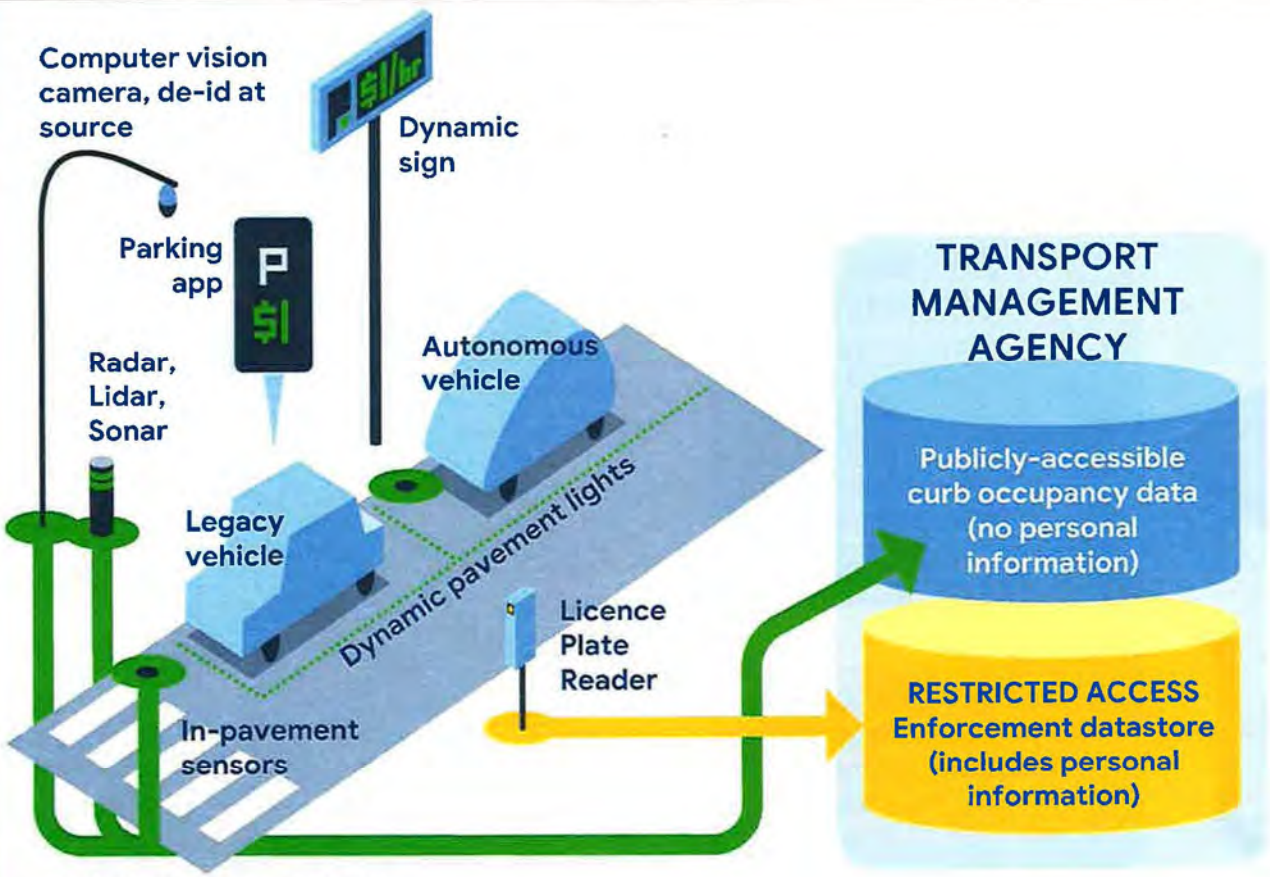


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Quality-of-life goals

Mobility: Dynamic Curb



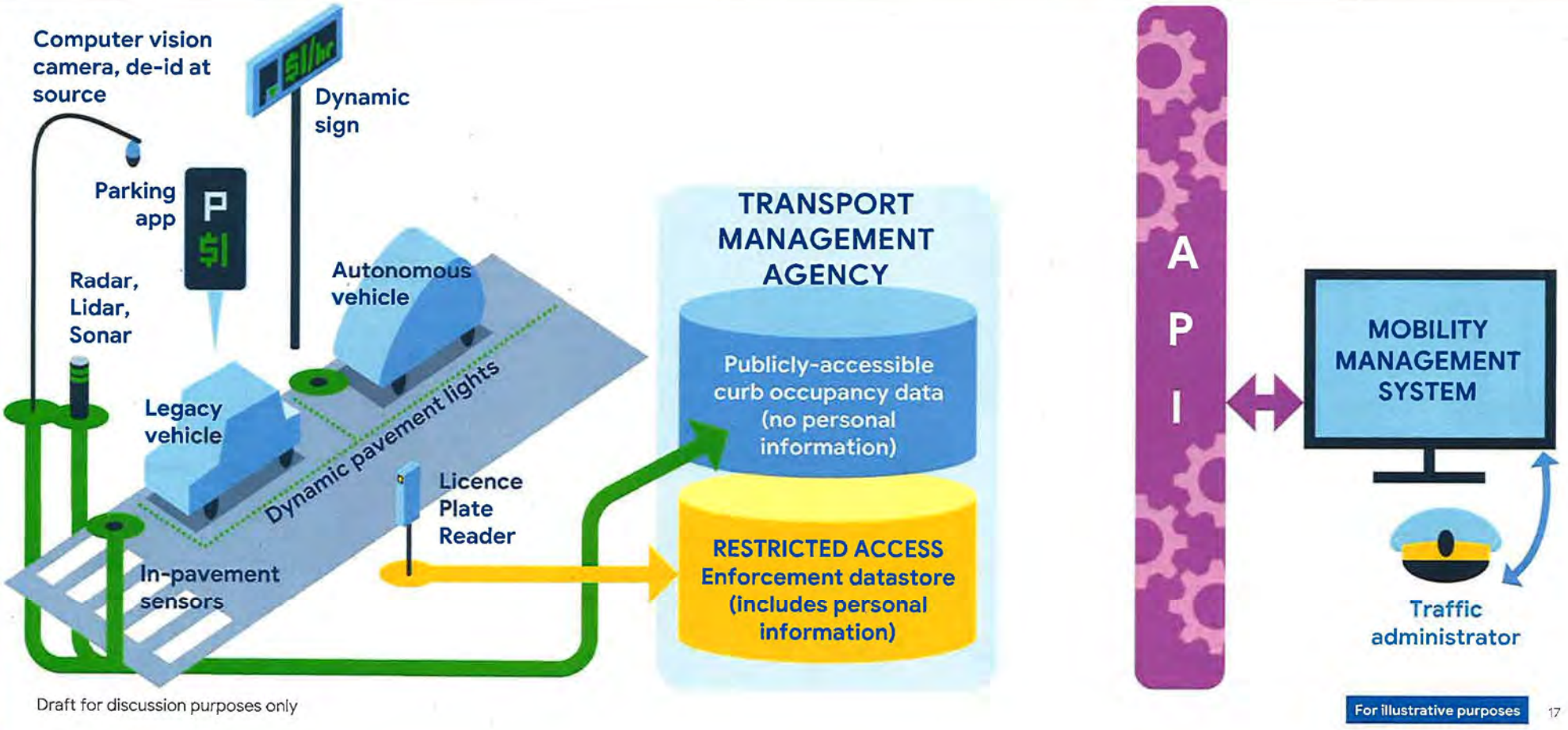
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Quality-of-life goals

Mobility: Dynamic Curb



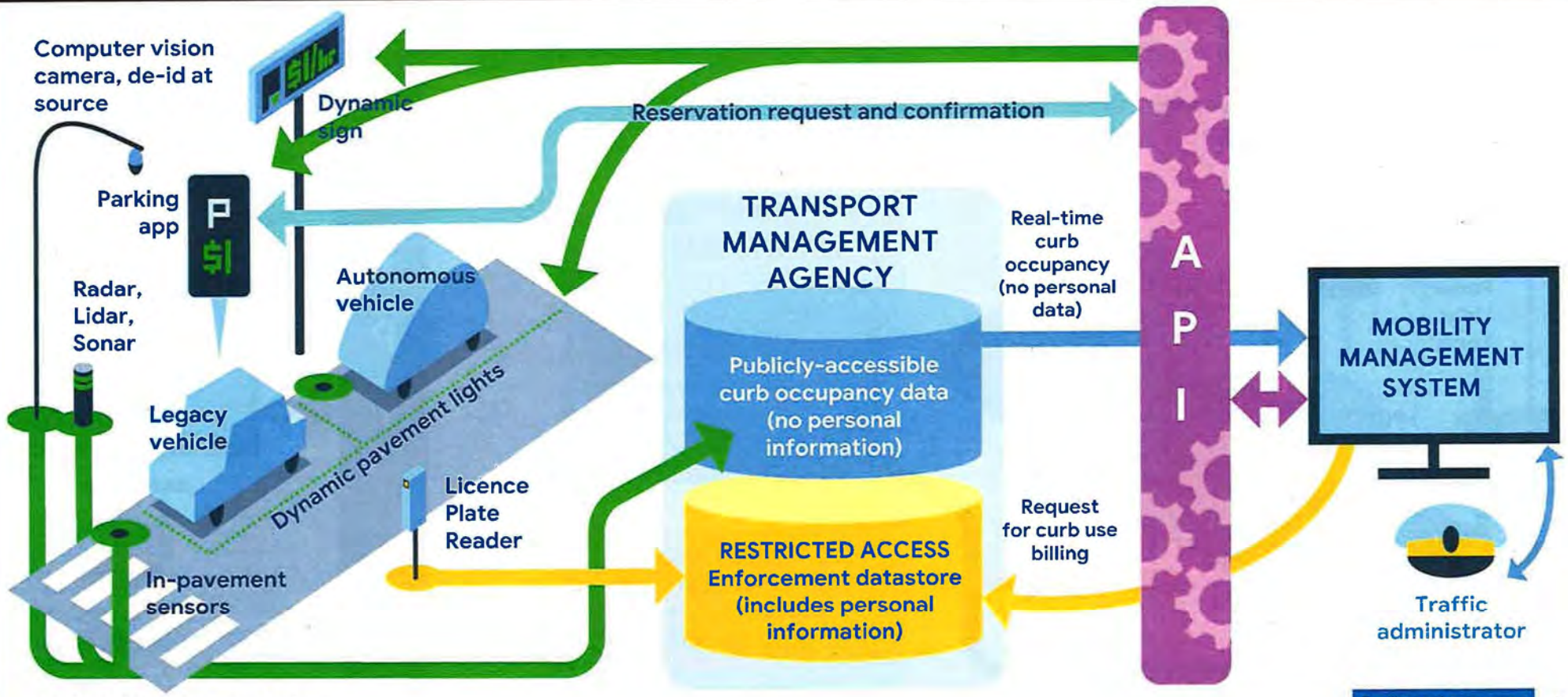
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Quality-of-life goals

Mobility: Dynamic Curb



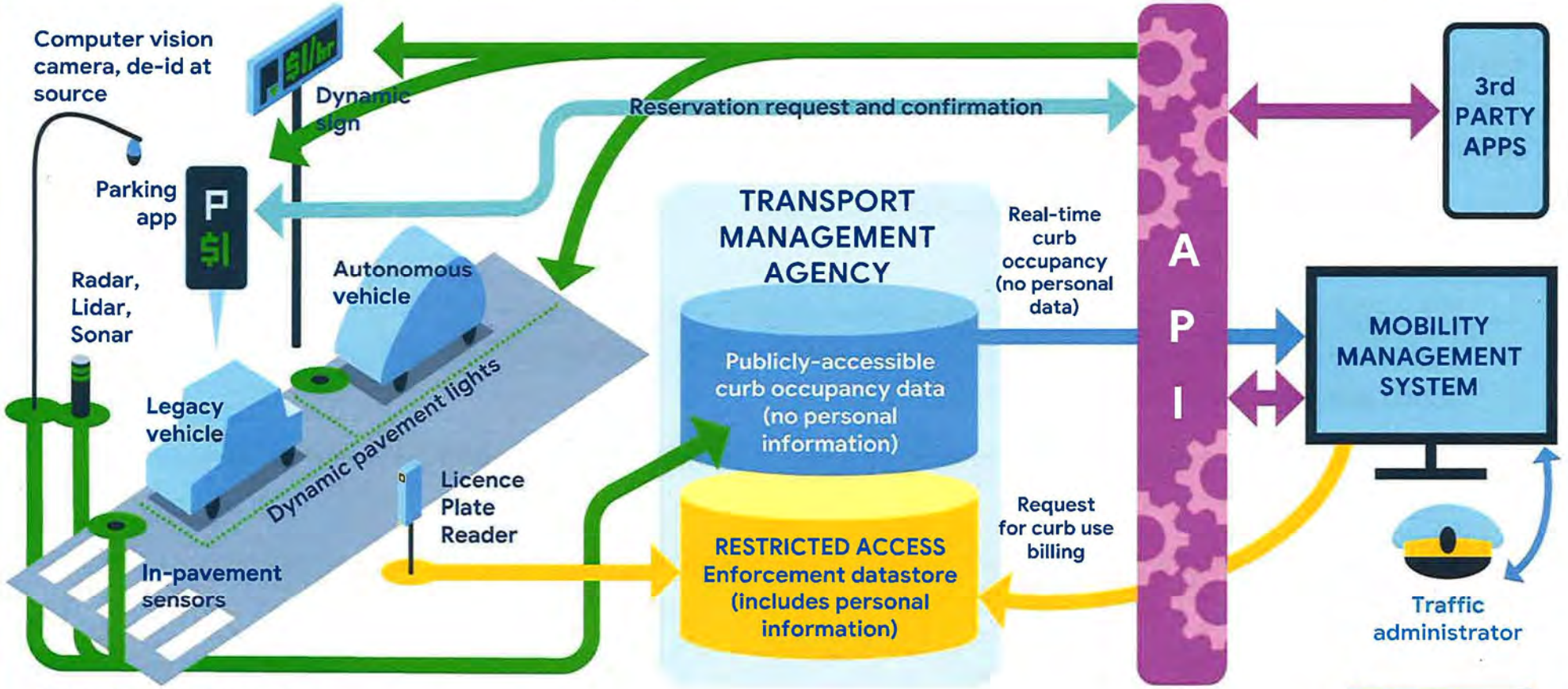
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Quality-of-life goals

Mobility: Dynamic Curb



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19

Quality-of-life goals

Further reducing data collection

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As the state of the art in privacy techniques evolve, we believe that the interaction between the person or vehicle requesting curb space and the mobility management system could happen without any personal information.

- The requestor may not have to provide an identity — instead, they could provide a single-use number for this reservation.
- The mobility management system may issue a digitally-signed reservation — a so-called "zero-knowledge proof" — so that the requestor may prove that they have a valid reservation for the curb space without revealing their identity.
- Payment may be possible anonymously using similar techniques, rendering the entire transaction anonymous.

Our objective is always to improve quality of life while minimizing the amount of data — especially personal data — required.

Overview

Digital Innovation Chapter Outline

SIDEWALK LABS

1. More Affordable and Flexible Digital Infrastructure

2. Data Standards That Are Open and Secure

3. A Trusted Process for Responsible Data Use

4. Launching Core Digital Services That Others Can Build On

Draft for discussion purposes only

More Affordable and Flexible Digital Infrastructure

SIDEWALK LABS

Ubiquitous connectivity

- Advanced optical network
- Flexible building connections
- Optimized wireless infrastructure
- A seamless and secure neighbourhood-wide network

Reduced installation and maintenance costs with an "urban USB port"

A distributed credential infrastructure to protect privacy

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More Affordable and Flexible Digital Infrastructure

A Note on Ownership

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The first two sections address fiber infrastructure and network topology.

We plan to work with existing providers to introduce these new technologies and build on the work done to date by Waterfront Toronto.

As with all digital infrastructure, **residents and businesses would not be required to use these solutions.**

01
Neighbourhood-Scale Software-Defined Network

02
Super Passive Optical Network

03
Koala™ Standard Outdoor Mounts with Power & Connectivity

More Affordable and Flexible Digital Infrastructure

Challenges for Neighbourhood-Wide Connectivity

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Deploying fiber, connections inside buildings, provisioning residential or business internet connections, and dealing with home routers is very expensive, and often insecure.

The technologies proposed hope to alleviate some of these problems.

Fiber Router



Fiber networks are difficult and expensive to upgrade as technology improves, and often aren't used efficiently.

Home Routers



Maintaining, updating, and debugging home networking equipment is technically challenging, and often
falls to consumers

Security Risks



Home routers with default passwords and misconfigured firewalls
create vulnerabilities.

More Affordable and Flexible Digital Infrastructure

Neighbourhood-Scale Software-Defined Network

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Why

- ISPs provide firewalls, which provide imperfect security, while making it very difficult for subscribers to access devices in their homes and office when they're not there.
- Subscribers are currently required to manage their own Wi-Fi equipment, which is technically challenging, results in vulnerabilities, and often results in interference between apartments.
- Internet of Things devices are hard to deploy, and are often insecure.

What

- Software-Defined Networks allow much more sophisticated, customized routing – for example, a private network for each subscriber including their home, school and office, regardless of their location.
- Will integrate with and support emerging 5G networks, as well as managed Wi-Fi access points to create seamless access with minimal interference.

How

- Internet of Things devices can be quarantined if they start exhibiting unusual behavior – trying to communicate with unknown internet endpoints, transmitting significantly more data than expected.
- Managed Wi-Fi significantly improves performance without requiring subscribers to be part-time network engineers.
  - Optimizing Wi-Fi systems with the layout of the city and buildings in mind can be done efficiently at scale.

More Affordable and Flexible Digital Infrastructure

Super Passive Optical Network (Super-PON)

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Why

- Fiber infrastructure often carries a small number of wavelengths, leading to underutilization of physical infrastructure
- Upgrading the network requires new equipment at multiple points throughout the physical network increasing costs and making upgrades difficult.

What

- Many more wavelengths sharing a fiber, one wavelength per building
- Passive optical splitters at intermediate points
- Each building detects its wavelength only
  - Upgrades only require new equipment at endpoints, not at intermediate points in the network

How

- New Super-PON approach, currently under consideration by IEEE 802.3 standards committee
- We plan to work with existing, local companies with experience in fiber deployment and service delivery.
  - We would provide specifications and technical expertise in this new approach

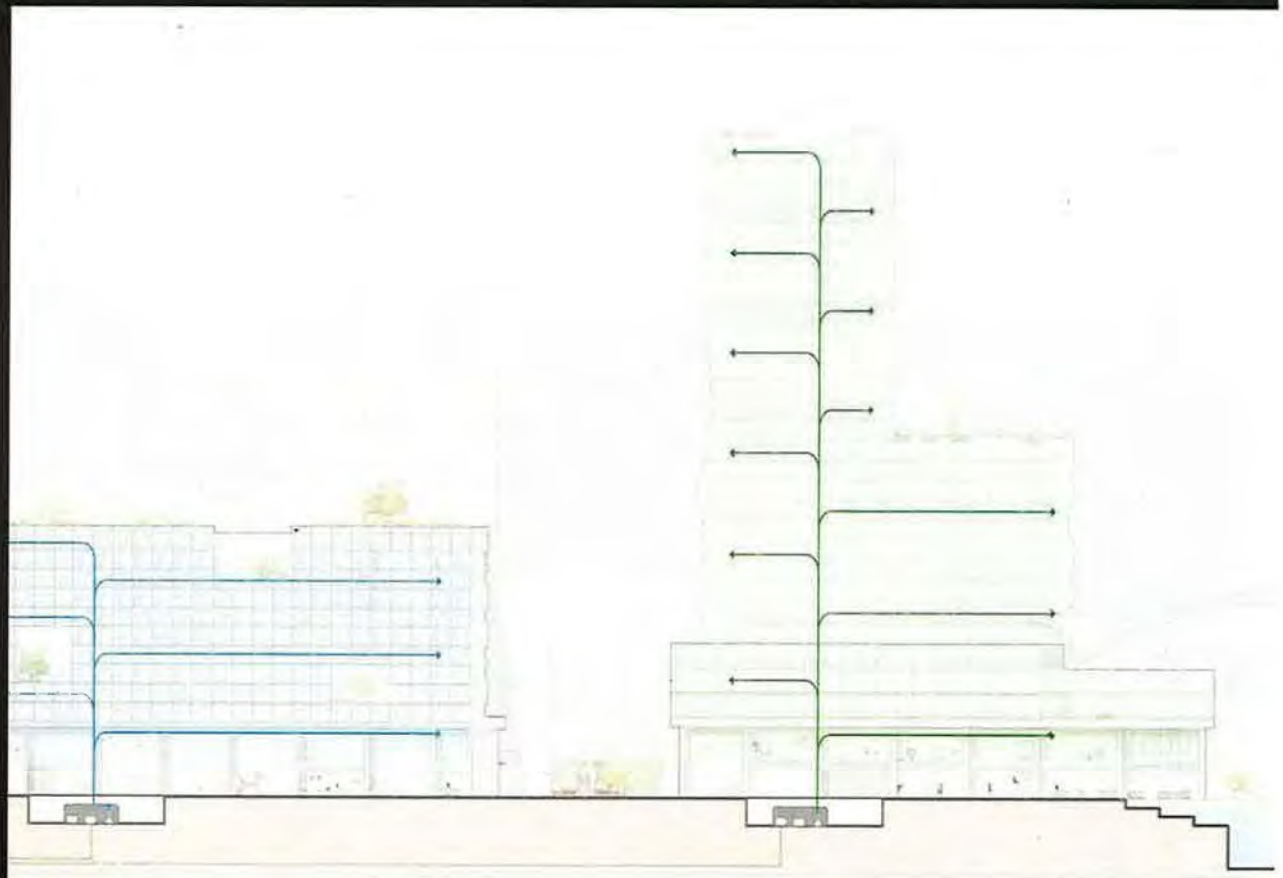
More Affordable and Flexible Digital Infrastructure

Super-PON

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Each building gets a different wavelength of light. Allows for:

- Reduced cost through reduced infrastructure
  - Less fiber required
  - Fewer network point of presence buildings
  - Less active equipment at intermediate points
  - Reduced power: light is generated at the head end and passive all the way to the receiving end
- Higher bandwidth, despite reduced fiber requirements



More Affordable and Flexible Digital Infrastructure

Buildings — Proposing New Specifications for This Tech

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Sidewalk Labs proposes that buildings conform to specifications that balance the goals of this Super-PON network with the ability for other providers to offer their own network services:

Points of Entry

Multiple point-of-entry locations

Conduits

Incoming conduits meet a set of specifications (e.g. buried depth, distance from water and sewer lines, coating materials, etc)

Meet-Me Room

A single location in the building where all telco-related equipment is installed with backup power and spare capacity.

Typical in commercial buildings, but less common in residential.

Risers

A vertical riser, dedicated to telecommunications wiring, accessible on each floor and designed for increased capacity

Cabling

Cat 6A wiring (or better) to every room for Power Over Ethernet wireless access points.

More Affordable and Flexible Digital Infrastructure

Koala: Standard Outdoor Mounts with Power & Connectivity

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Why

- Mounting, maintaining, & upgrading signals and sensors is **expensive, disruptive and time consuming**
  - Avg cost per intersection for Adaptive Signal Control: $20k-30k
- This leads to **slow adoption cycles** for new technology
- Example devices:
  - Lights
  - Wi-Fi access points
  - 5G cell base stations
  - Temperature, wind speed, humidity, rainfall sensors
  - Lidar, radar, other sensors collecting non-personal data

What

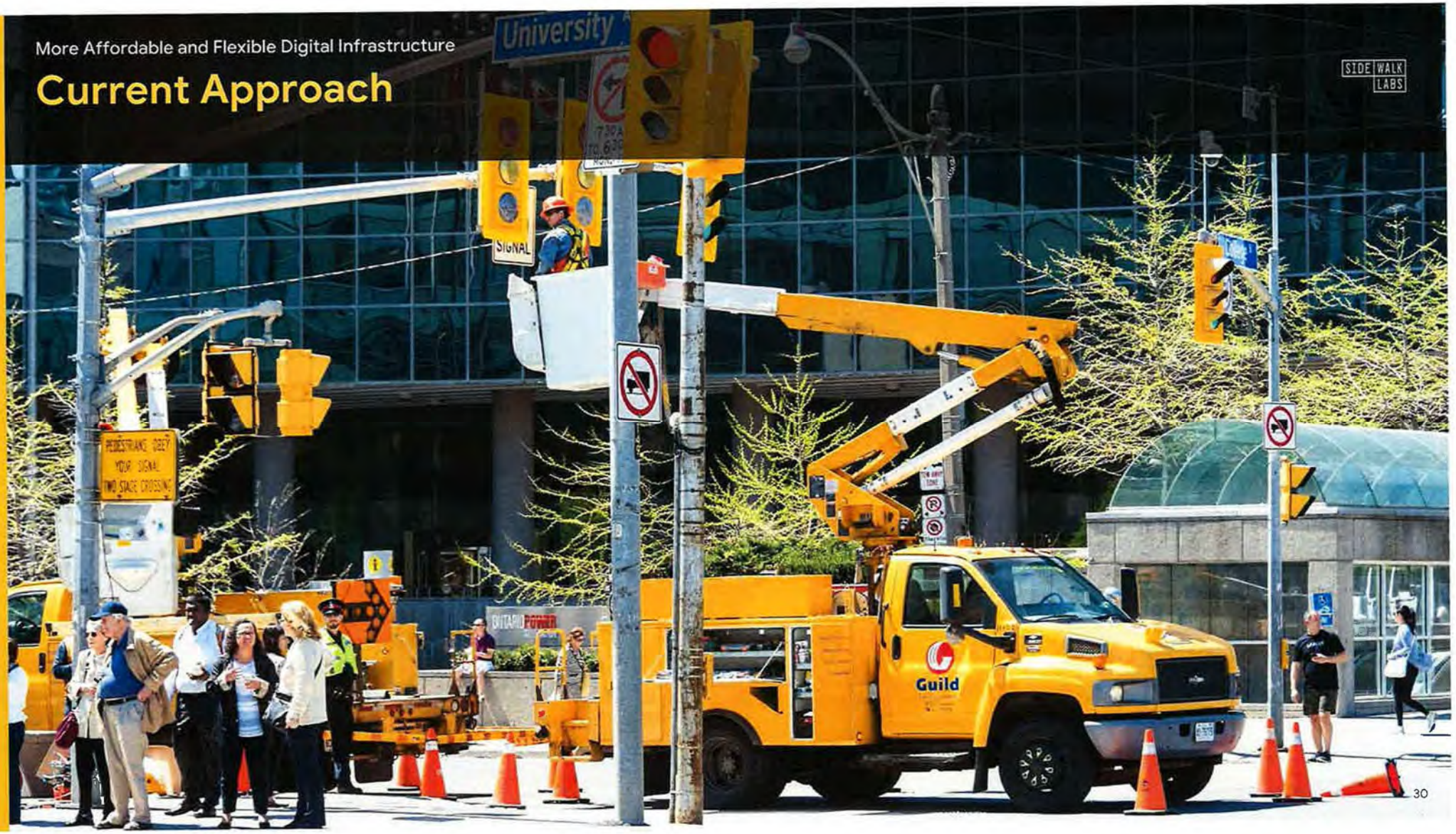
- **Flexible, standardized infrastructure** that can host many types of street digital infrastructure
- Similar in spirit to USB, but suitable for the demands of the public realm on street poles

To be clear, the Koala is simply a mount and connector, **not a device that collects urban data.**

How

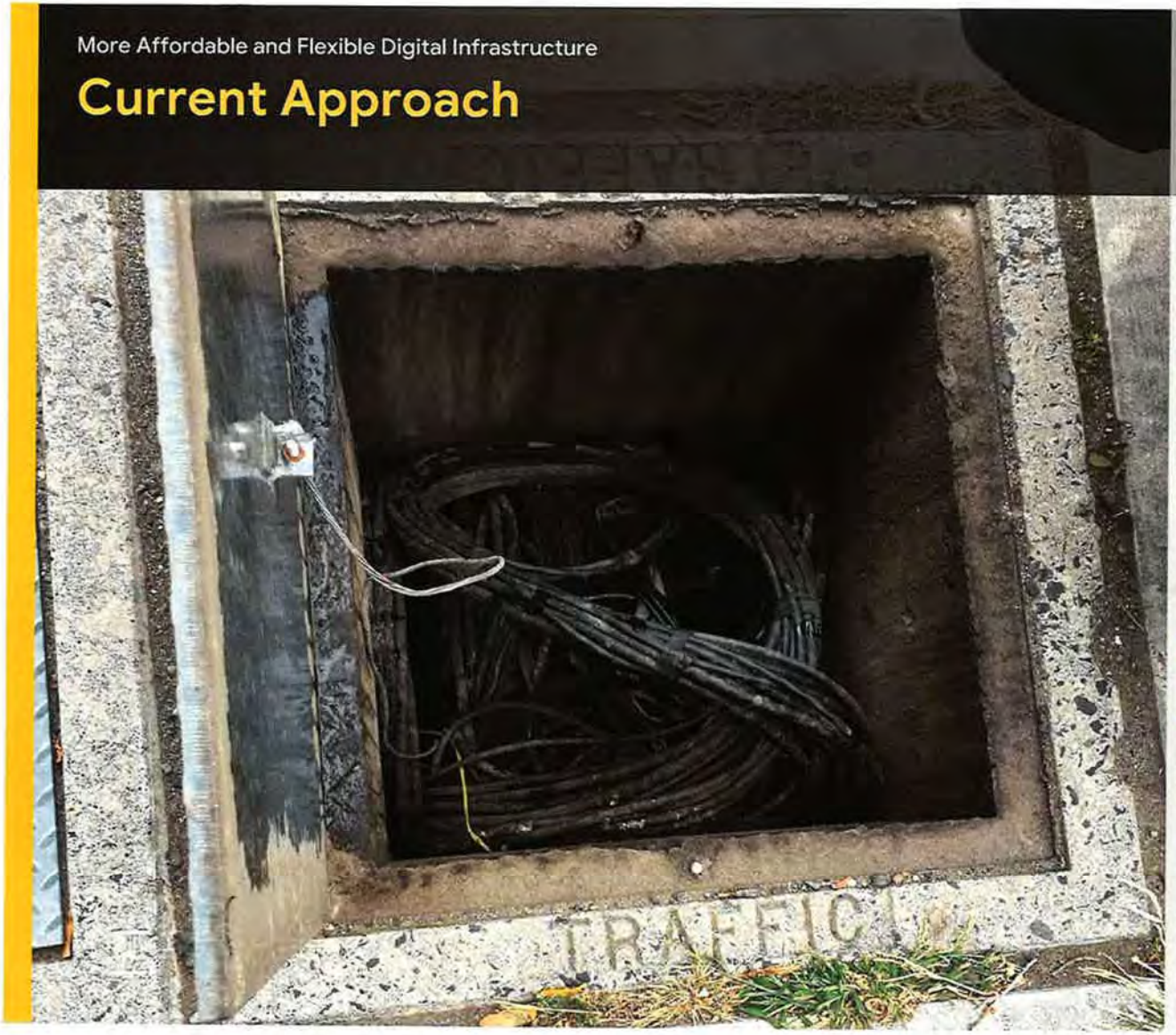
- **Current prototype** (subject to change):
  - Hermetically sealed package
  - 200 Watts
  - **6 gigabits per second** of data through short-range wireless or wired connection,
  - Mechanical mount that is **installable and removable by ground-based operators** with special poles (and in the future, possibly by drone)

Current Approach

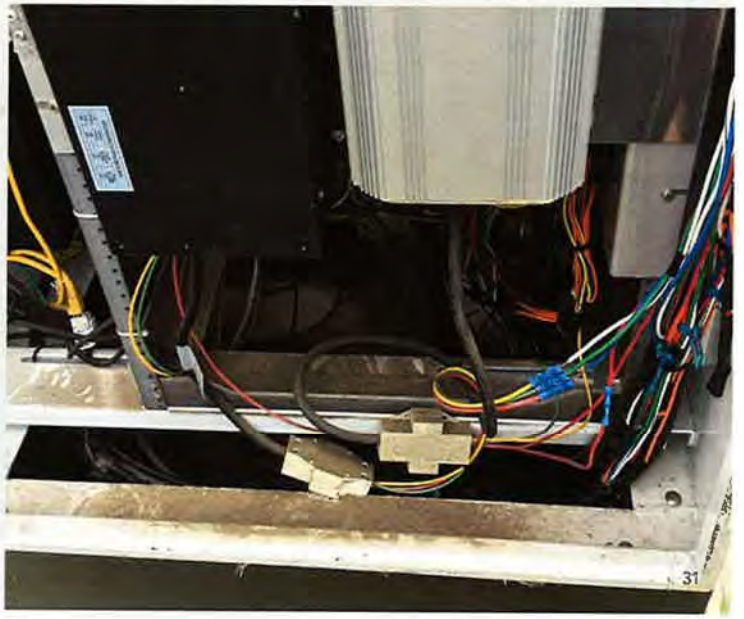


More Affordable and Flexible Digital Infrastructure

Current Approach







More Affordable and Flexible Digital Infrastructure

City of the Future?

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More Affordable and Flexible Digital Infrastructure

Koala – General Requirements

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01

Mechanical Security & Ease of Installation / Removal

Infrastructure should be easy to install and maintain: able to be mounted or swapped out within minutes by human operators without large equipment or street closures.

It should also be robust to wind, dust, precipitation, temperature variations and other challenges of the urban environment.

02

Power

Client devices inevitably need power. Some devices, like displays and lighting, may require more than 100 watts of wired power.

Other devices, like air quality sensors, could possibly be powered through solar panels.

03

Connectivity

Most client devices will need to send and receive data. In locations like Quayside with high-quality, reliable wireless connectivity, most devices might not need hard-wired data connections.

If this system used for 5G antennas, a wired connection will be required.



More Affordable and Flexible Digital Infrastructure

What Else Does Koala Provide?

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01

Security

Physical device authentication and data encryption

02

Civic Data Trust Control

Ability for Civic Data Trust to turn off network or power for devices out of compliance with Civic Data Trust requirements.

03

Ecosystem Development

Standardization and reduction of cost and disruption creates the conditions for a thriving ecosystem of urban technology creators, such as startups, researchers, or established companies.



More Affordable and Flexible Digital Infrastructure

Using Koala Will Not Be a Requirement

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Devices will not be required to use Koala, but we hope that the **cost reduction and ease of use make them an attractive option**

Koala will be a standard, similar to USB

Device adoption will determine the standard's success



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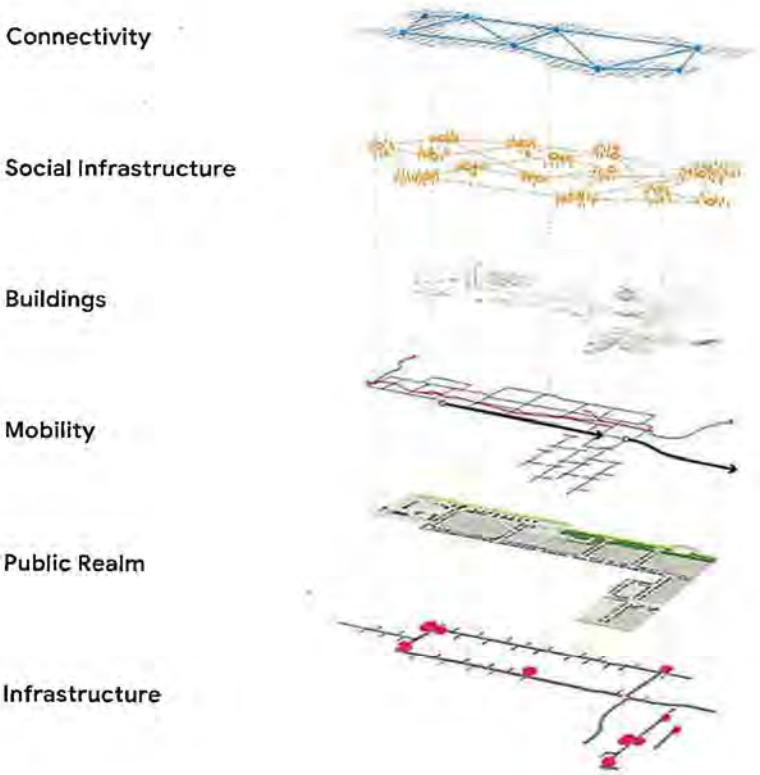
Data Standards That Are Open and Secure

Sidewalk Labs' Vision: Catalyze Digital Innovation

The ability to create the conditions for digital innovation is at the heart of Sidewalk Labs' vision for the city of the future. Digital innovation is the basis for many of the core planning initiatives that Sidewalk Labs will propose throughout the Master Innovation and Development Plan to improve mobility, affordability, sustainability, and economic opportunity. It is also essential for catalyzing an ecosystem of new services and solutions by Canadian companies, local Toronto entrepreneurs, and other third parties from around the world.

How we plan to get there

- Provide Affordable and Flexible Digital Infrastructure
- Set Data Standards That Are Open But Secure
- Create a Trusted Process for Responsible Data Use
- Launch Core Digital Services



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Data Standards That Are Open and Secure

Sidewalk Labs' Vision: Catalyze Digital Innovation

Designing technology to support our quality of life goals has revealed patterns: common pieces of infrastructure and specific services that are required to bootstrap digital innovation in the neighbourhood for Sidewalk Labs and others.

WHAT SIDEWALK LABS WILL BUILD

Taking the same approach to designing solutions for **sustainability**, **flexible public realm**, **community**, **buildings**, **accessibility**, etc. leads us to believe that we should create a new standard for digital infrastructure and services in cities, including:

- Ubiquitous connectivity
- Standardized mounts and power
- A high-resolution 3D map of the neighbourhood
- An open data hub which will provide real-time access to data in standard formats through well-documented interfaces

The fact that Sidewalk Labs is committing to build these components does not preclude others from deploying technology that improves on, competes with, or replaces them.

WHAT OTHERS WILL BUILD

The lion's share of technologies that make Quayside unique will be developed and deployed by an ecosystem of many innovators:

- Just as in the World Wide Web, multiple providers can coexist, and technological solutions can integrate, as long as they agree on standards
- Others should be welcome to provide better, different, cheaper infrastructure and services
- We hope that this will enable a wide range of Canadian startups to innovate more quickly, and use Quayside as a springboard to success
- All systems collecting or using Urban Data —whether created by Sidewalk or third parties—will be subject to Civic Data Trust governance

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Data Standards That Are Open and Secure

Open architecture makes this possible

Sidewalk Labs will not create a centralized, monolithic platform. Rather, we will work with partners to create an open architecture—one that enables and encourages collaboration and experimentation.

In order for anyone to innovate, and have the opportunity to replace components that Sidewalk Labs and others build, there must be no proprietary lock-in. This requires:

- **Well-documented, standardized formats and interfaces**
  - Any party will have the information required to build a replacement component for any urban system, or to create an entirely new application.
- **Easy access to public-domain data**
  - Standards are worthless if it's not possible to get access to data. For example, devising a new optimization algorithm for traffic requires training and test data, so traffic volume data should be made broadly available.
- **Data portability**
  - An existing system will likely have access to historical data provided to it by neighbourhood systems. This data should be able to be exported from the existing system so that new systems are not at a disadvantage for training and bootstrapping.
  - This is similar to email systems that allow the user to export all of their historical email messages so that they can move to a new provider, eliminating lock-in.

Data Standards That Are Open and Secure

Example of an Open System: The World Wide Web

If urban technology used open standards in the same way that the World Wide Web does, innovation would explode, and the risk of vendor lock-in would be dramatically reduced.

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You can use any browser...

to visit any web page...



served by any web server.

Apache

NGINX

Microsoft IIS

LITESPEED

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Data Standards That Are Open and Secure

Example: World Wide Web Standards

Standards enable innovation and competition.

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Formatting
Hypertext Markup Language (HTML), Cascading Style Sheets (CSS)

Images
Portable Network Graphics (PNG), Joint Photographic Experts Group (JPG)

Interactivity
JavaScript

Communication
HyperText Transfer Protocol (HTTP)

Security
Secure Sockets Layer (SSL)

Anyone can build a web browser as long as it implements standards like HTML, CSS, JavaScript, HTML and SSL. The most popular browsers are free, and their cores are open source.

Likewise, anyone can build a web server as long as they implement HTTP, SSL, etc. The most popular servers are free and open source.

With partners, we hope to significantly advance a competitive, innovative urban technology ecosystem by using, developing, and promulgating standards.



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Published Standards

At the core of Sidewalk Labs' approach to catalyze innovation is the belief in the importance of published standards for digital hardware and software.

Sidewalk Labs has a three-part plan to achieve its goal of an open city

- First, it proposes to provide data in standard formats, and via well-defined, public application programming interfaces (open architecture). Where relevant standards do not exist, it proposes to work with other companies, researchers and standards bodies to create those standards.
- Second, it proposes to make this data publicly accessible by default (open access).
- Third, it proposes that the software source code required for others to integrate with each of these systems be made publicly available under a free software license (open source).



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SIDEWALK LABS

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Responsible Data Use

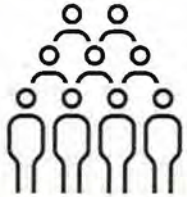
Alyssa Harvey Dawson,
Sidewalk Labs - GC and Head of Data Governance

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Sidewalk Labs' Vision: Digital Governance Framework

SIDEWALK LABS

Urban Data Collective and Urban Data



Responsible Data Use Assessment



Responsible Data Use Guidelines



Published Standards



A New Global Model for the Collection and Use of Urban Data

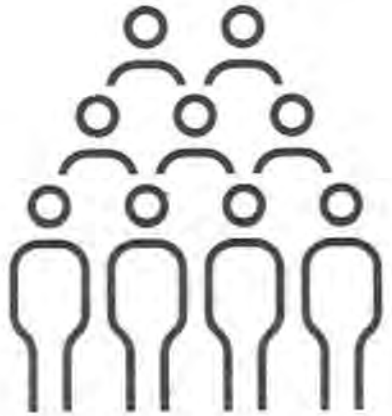
Sidewalk's proposed approach to digital governance in Quayside will demonstrate to Toronto, Canada, and the rest of the world that cities do not need to sacrifice their values of inclusion and privacy for opportunity in the digital age.

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Urban Data

What we heard

- Protect more data, not just Personal Information.
- Data use also impacts groups of people and communities.



How we responded

Torontonians want more data to be protected, so we are using a different term to apply to data collected in physical or common spaces, which includes "Personal Information" and information that is not connected to a particular individual.

Sidewalk Labs proposes to call this type of data "Urban Data".

Urban Data

Urban data merits special focus because:

- The lack of transparency about sensors in the public realm causes a feeling of being surveilled and challenges whether consent is meaningful.
- The collection and use of personal and non-personal information impacts groups of people or the community.
- It is collected in a physical space in the city. Geography is one characteristic that, in combination with other considerations, make it stand out as worthy of additional responsible data use guidelines.
- Some types of Urban Data can reasonably be considered a public asset and should be made publicly accessible by default.

"Urban Data" is Personal Information, de-identified data, non-personal data, and aggregated data collected and used in **physical** or **community spaces** in the project area.

"Transactional Data" is a term we use to refer to data that comes from consent-based relationships between organizations and individuals (examples include data from apps, website, credit card transactions). Incorporating additional requirements on this type of data in connection with the project is not as feasible due to its transitory nature.

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Urban Data Collective

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What we heard

- In addition to personal and collective privacy, Torontonians are concerned with the ownership and stewardship of urban data.
- Urban Data is often considered a collective or community asset.
- Guidelines should be applied and enforced consistently to gain trust.

How we responded

Sidewalk Labs proposes that an independent entity - the **Urban Data Collective** - manage urban data and make it publicly accessible by default. Because of the novelty and complexity of this, we suggest that the Urban Data Collective be **implemented in two phases** - one focused on getting the body up and running quickly and the other on a more long-term solution.

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Urban Data Collective: Initial Implementation

Sidewalk Labs proposes that the final agreement between Waterfront Toronto and Sidewalk Labs call for **the creation of an independent, non-profit entity, the Urban Data Collective, as the digital governing body** for the Sidewalk Toronto project.

The UDC would enter into Data Sharing/Use Agreements with organizations, with terms governing the collection, storage, security, etc. of Urban Data. A breach of these terms would be actionable in court.

The agreement would:

- Require organizations seeking to collect or use Urban Data in the project area to apply to the UDC for approval;
- Authorize the creation of the Urban Data Collective entity

Urban Data Board

The Urban Data Board would initially include a data governance/privacy/IP expert, a community representative, a public sector representative, an academic representative and a Canadian business industry representative.

The Board would hire a **Chief Data Officer**, who would be responsible for:

- Developing the Charter for the Urban Data Collective;
- Promulgating "Responsible Data Use Guidelines" that respect existing privacy laws but also apply new standards for collecting and using Urban Data;
- Structuring oversight and review processes;
- Determining how the collective will be staffed, operated, and funded; and
- Coordinating, as necessary, with privacy regulators and other key stakeholders.

The Urban Data Board could fundamentally operate in ways similar to Internal Review Boards or Research Ethics Boards in academic institutions for research or content moderation boards set up in-house at social media companies.

Urban Data Collective

Funding

Sidewalk Labs proposes that each party that wants to collect and use data in the designated geography pay a **data collection and use administration fee** to cover the costs of the Urban Data Collective. These costs could include salaries for the Chief Data Officer, staff to manage the applications, reviews, audit and enforcement, and other customary expenses for the Urban Data Board.

Longer Term Options

After a period of time, we could envision that the UDC be transformed into a public-sector agency or a quasi-public agency.

Open Questions

- What are the pros and cons of each of these approaches?
- What would be the best way for the UDC to work with privacy regulators?

Responsible Data Use Guidelines

SIDEWALK LABS

What we heard

- Sidewalk Labs should not have an advantage in the development of urban innovations.
- Concerns about data collection and use go beyond privacy laws and must also consider other concerns such as data stewardship, access to data, security, data ethics and responsible AI.



How we responded

The RDU Guidelines go beyond privacy to address key areas of digital governance, ethics, open access to information, as well as the ways in which aggregate or de-identified data can impact individuals and groups of people, including through the use of advanced analytics, such as artificial intelligence.

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Responsible Data Use Guidelines

Beneficial purpose. All projects must apply Canadian values of diversity, inclusion, and privacy as a fundamental human right. To do this, there must be a clear purpose and value to any proposed use of urban data, and a direct tie to the ways in which the project and proposed data collection activity are benefiting individuals or the community.

Publicly accessible by default. Organizations should make the de-identified or non-personal data that they have collected publicly accessible to third parties by default.

Transparency and explainability. Organizations should inform individuals of how and why their information is being collected and used, and do so in a way that is proactive, clear, and easy to understand.

Responsible AI. Organizations should develop algorithms according to principles that include fairness, accountability, inclusiveness, and reduce bias.

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Responsible Data Use Guidelines

Data minimization, security, and de-identification by default. Organizations should collect the minimum amount of data needed to achieve the beneficial purpose and should seek to use up-to-date de-identification techniques to reduce the personal information that they collect and use.

No selling or advertising without explicit consent. While there will not be prohibitions placed on data collectors who would like to sell data containing personal information or use such data for advertising, a higher level of scrutiny should be placed on projects that want to use personal information for these purposes. Sidewalk Labs has already committed publicly that it will not sell personal information to third parties, or use it for advertising purposes. It also commits to not share personal information with third parties, including other Alphabet companies, without explicit consent.

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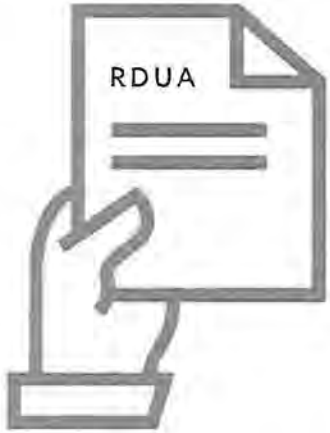
Responsible Data Use Assessment

The RDUA is a tool used to incorporate Privacy by Design, and examine other issues around data use, stewardship, security, and access.

Sidewalk Labs proposes that the RDUA be submitted to the Urban Data Collective for any product, pilot, or project that wants to collect or use Urban Data.

The UDC would use the RDUA to assess how the proposal conforms to the RDU Guidelines, including applicable privacy laws.

Sidewalk Labs has been developing this assessment tool internally with input from advisors and experts and has been using it to assess its pilot projects.



The RDUA is comprised of four sections:

1. Purpose
2. Data Sources and technology
3. Legal compliance
4. Risk-Benefit analysis

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Responsible Data Use Assessment: 1. Purpose

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Purpose. The first section of the RDUA asks for a description of the purpose of the project, service, or product, including its objectives and goals, as well as the urban challenges it hopes to address. Some examples of questions that might be asked in this part of the RDUA include:

- What is the objective for this project? Clearly state the problem that is being solved.
- Clearly state the measurable goal or outcome of the project.
- How likely is the proposed technology and collection/use of data to solve the problem as described?
- What are the alternatives to the technology or method of collection? Why are they not sufficient?

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Responsible Data Use Assessment: 2. Data sources and technology

Data sources and technology. The second section of the RDUA requires a description of the technology or data-collection methods, the data sources or types, and the parties who have access to the data. Some of the questions asked in this section include:

- What are all the sources of the data, internal and external?
- Does the data activity involve personal information?
- Does this project involve the collection or use of data about people?
- Is the data observed (created as the result of individuals or activities being observed and recorded)?
- Is the data stored in Canada? If not, is there a reason beyond business case/financial considerations that the data would not be stored in Canada?
- Who are all the possible stakeholders and parties involved or related to the data activity? What are their interests and potential concerns?
- Is the data, or a subset of data, going to be used for advertising purposes?
- Is the data going to be sold to third parties?

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Responsible Data Use Assessment: 3. Legal compliance

Legal compliance. The third section of the RDUA captures conformance to applicable privacy laws. Examples of questions asked in this section include:

- Describe how the data activity complies with applicable Canadian privacy laws.
- If the data activity involves personal information, there must be explicit, express consent for collections, uses, or disclosures that: (i) involve sensitive information; (ii) are outside the reasonable expectations of the individual; and/or (iii) create a meaningful residual risk of significant harm. Please explain how you have achieved this requirement.
- Does the data activity include mechanisms that explain how data is used, how benefits and risks to individuals are associated with the processing, and how individuals may participate and object where appropriate?
- Describe the notice, consent and control provided to the user.
- If the data activity includes personal information, how has it been de-identified? If it has not been de-identified, what is the beneficial purpose for keeping the data identifiable?
- Is there a less privacy invasive data intensive way to achieve the goals of the data activity (including potential insights)?

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Responsible Data Use Assessment: 4. Sections

Risk-Benefit analysis. The fourth section of the RDUA asks the proposing entity to detail and rate the risks and benefits associated with the project and data collection activity, and how any risks have been mitigated. Example questions might include:

- Could the anticipated use of technology harm or benefit certain individuals, groups of people, or communities in unintended or unexpected ways?
- What are the benefits to the individual or groups of individuals? What are the impacts to the community of this data collection activity?
- Could the anticipated use of the data create a risk of harm to the individual or group of individuals?
- How does the data activity treat groups equally and fairly?
- Are there differences between areas and communities that need to be taken into account when interpreting the data? If so, how are those taken into account?
- Are you using analytical driven models, insights or algorithmic decision making, that could impact individuals?
- Is there a reasonable risk of harm to individuals or groups by releasing the data or the source code?
- How significant is the risk? How likely is the risk to be realized?

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Active Energy Management Use Example (Building Efficiency)

A private office building owner and operator wants to reduce energy consumption and emissions in one of its office buildings (Quayside 1) to test the feasibility of the initiative before bringing the same process to all of its buildings in Quayside.

The building owner will use the following methods of collection to collect and use the following data:

- Infrared motion sensors: occupancy data (aggregate data)
- Weather data from a third party and temperature data from the connected thermostats in the building (non-personal data)

The next slide is a brief illustration of how this proposed data activity could be reviewed, and depending on a balance of factors, including adherence to the RDU Guidelines, approved by the Urban Data Collective.

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Active Energy Management Use Example (Building Efficiency)

SIDEWALK LABS

Step 1: Classify the Data

The building is located in Quayside and the information being collected in a space that could be considered a public environment or public asset. The data activity involves data about people. This data activity involves Urban Data.

Step 2: Submit a RDUA

The building owner must complete a RDUA and an application detailing where the sensors would be placed. The RDUA would include a description of the project, a description of the data sources and types, how the data activity conforms to applicable privacy laws, and a full analysis of the data activity's impacts, risks, and benefits.

Step 3: The Decision

The UDC's Chief Data Officer would review the RDUA and application and, using the RDU Guidelines and guidance from the board, make a decision on whether to approve the data activity with reasons why or why not.

Step 4: Post-Approval Conditions

To ensure transparency, if the data activity has been approved, a summary RDUA is published, the sensors are registered and placed on a digital publicly accessible map, and non-personal information is made publicly accessible.

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Overview

Digital Innovation Chapter Outline

1. More Affordable and Flexible Digital Infrastructure

2. Data Standards That Are Open and Secure

3. A Trusted Process for Responsible Data Use

4. Launching Core Digital Services That Others Can Build On

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Core Digital Services That Others Can Build On

Sidewalk Labs' proposed service or application	What urban data it proposes to use and publish	Possible third-party applications that could build on this data	What existing ecosystem the innovation supports
Mobility management system To reduce congestion and encourage shared trips, this proposed mobility management system would coordinate all travel modes, traffic signals, and street infrastructure, and apply demand-based pricing to curb and parking spaces.	Curb space availability (e.g., non-personal occupancy sensors) Pedestrian and cyclist detection and counts (e.g., non-personal lidar/radar) Vehicle detection, counts, speed (e.g., using a camera that does de-identification at source) *Restricted data (not published for privacy reasons):* Vehicle identification data, such as license plate or transponder id, collected on behalf of city parking enforcement	A startup could build a trip app that helps find the fastest or cheapest or greenest way from A to B. A policymaker could create more informed policy decisions around parking availability and transit service. A self-driving technology startup could improve its pedestrian-detection system. A researcher could detect pedestrian near misses and evaluate the performance of intersection designs on street safety. Employers could start programs that encourage workers to shift commute times to decrease congestion.	*(Names are illustrative only and do not imply partnerships or endorsement.)* *Self-driving vehicles:* Aptiv, Cruz, Uber, Lyft, Waymo *Sensor and traffic management:* Miovision, Brisk Synergies, P3Mobility, Leddartech, SMATS Traffic, Numina, RapidFlow, NoTraffic, Axilion, GRIDSMART *Parking:* Jrop, Passport, Sensys, All traffic, Pay by phone, Cloudpark, Curbway *Routing apps:* Google/Apple/Bing Maps, Waze, Transit App

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Core Digital Services That Others Can Build On

Sidewalk Labs' proposed service or application	What urban data it proposes to use and publish	Possible third-party applications that could build on this data	What existing ecosystem the innovation supports
Outdoor comfort system A proposed system of outdoor-comfort tools, deployed in real-time, could dramatically increase the amount of time it is comfortable outside: building raincoats to block rain, awnings to provide shade, and fanshells to provide group cover.	Hyper-local temperature, humidity, wind speed, rainfall, and sunshine levels Raincoats and fanshell status	A retail startup could build an app that identifies the best locations or times for a pop-up store based on weather patterns. Health organizations could build apps that show residents a jogging route that avoids wind and snow and maximizes sun and interesting views. *These apps could also draw from the mobility sensors to avoid congested areas.*	*(Names are illustrative only and do not imply partnerships or endorsement.)* *Weather data:* Ambience Data, Earth Networks, IBM, The Climate Corporation *People flow:* Ecocounter, Numina, PeopleFlow

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Core Digital Services That Others Can Build On

Sidewalk Labs' proposed service or application	What urban data it proposes to use and publish	Possible third-party applications that could build on this data	What existing ecosystem the innovation supports
Energy management system (Schedulers) This proposed system of Home, Office, and Building Operator Schedulers would automate energy use to optimize residential, commercial, and building heating, cooling, and electricity systems — reducing energy waste and relying on clean energy while increasing tenant comfort.	Outdoor weather; Aggregate and de-identified data on room temperature and humidity; Energy use by type (e.g., from plug loads, lighting, HVAC); motion or occupancy; ambient light; comfort levels / complaints. *Restricted data (not published for privacy reasons):* Individual measurement , data for the metrics above, e.g. timestamped data about particular plug loads, occupancy detection for particular rooms.	Energy researchers could use this data to compare neighborhood energy usage across a city. Architects and designers could use this information to improve building designs. Regulators could use such information to create a dynamic energy code system based on actual operators instead of design-based models. Climate organizations could create apps to help individuals or households gamify their energy savings (provided users consented to share their data).	*(Names are illustrative only and do not imply partnerships or endorsement.)* *Building Management Systems:* Automated Logic Controls, Johnson Controls, Schneider, Siemens. *Niche Building Analytics Providers* Basking Automation, Comfy, ElevenX, Encycle, Parity, Peak Power, Cortex, Raybased, Sensorsuite, Simptek, Shift Energy, Thoughtwire, Density.io, InnerSpace. *Energy use measurement:* Voltserver, Enertiv, Sense, Wemo, Currant. *Thermostats:* Ecobee, Honeywell, Nest, Samsung, *Smart switches, lighting, appliances, and other hardware:* Lutron, Enlighted, LG, TZOA.

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Core Digital Services That Others Can Build On

Sidewalk Labs' proposed service or application	What urban data it proposes to use and publish	Possible third-party applications that could build on this data	What existing ecosystem the innovation supports
Building waste management systems To help divert landfill waste, a proposed program of responsive digital signage would help residents and businesses sort their trash, recyclables, and organics (foods) by illustrating common sorting mistakes. "Pay-as-you-throw" waste chutes would support this recycling program while helping to reduce overall waste.	Trash volume, pressure scales (weight), waste classification for sorting (e.g., using computer vision properly de-identified at source), contamination issues (i.e. coffee cups)	An environmental researcher could team up with a fabrication studio to design a more sustainable coffee-cup lid based on disposal habits. City planners could use this information to understand best practices in buildings, to test new systems and strategies to scale to other buildings. Computer vision startups could use information on common recycling errors to design augmented reality apps that could help people classify waste. Environmental groups could design an app that provides feedback to consumers, both residential and commercial, encouraging higher recycling rates.	*(Names are illustrative only and do not imply partnerships or endorsement.)* *Smart waste:* AMP Robotics, Anaconda, CleanRobotics, Compology, Enevo, RTS Recycle Track Systems, Rubicon Global, Zerocycle.

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Core Digital Services That Others Can Build On

Sidewalk Labs' proposed service or application	What urban data it proposes to use and publish	Possible third-party applications that could build on this data	What existing ecosystem the innovation supports
Active stormwater management A proposed active stormwater system would rely on green infrastructure and digital sensors to to retain stormwater, reuse it for irrigation, and empty storage containers in advance of a storm to avoid combined sewer overflow.	Stormwater tank level, stormwater flow meter, total suspended solids, valve and gate status, underwater water-quality near shore.	Environmental researchers could design an app to determine the amount of plantings and greenery needed to reduce stormwater flows and the need for secondary treatment. City planners could use this information to better plan (and minimize) hard infrastructure needs for stormwater, such as tanks and treatment facilities. Open data integrations could add this information to the measurement and publication of open stormwater data currently gathered by the city, adding new locations and more frequent updates.	*(Names are illustrative only and do not imply partnerships or endorsement.)* *Digital management:* Aquatic Informatics, IBM, Innovyze, Opti, Parjana, RainGrid, Suez, Veolia North America. *Water quality:* Acoubit, FREDsense, Orb, Xylem, ZwitterCo.

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Core Digital Services That Others Can Build On

Sidewalk Labs' proposed service or application	What urban data it proposes to use and publish	Possible third-party applications that could build on this data	What existing ecosystem the innovation supports
Flexible retail platform (SeedSpace) A proposed leasing platform called SeedSpace would help small businesses and other retailers book a wide range of ground floor space sizes, from anchor-tenant spaces to micro stalls, for short- or long-term uses.	Footfall and rate data (e.g. non-personal, aggregate lidar / radar), space size, availability, aggregated tenant turnover rates (aggregated and de-identified)	A retail startup could create an app that determines the best times of the year or day for an entrepreneur to set up in the area. *This could also draw on hyperlocal weather data from the outdoor comfort system.* An economic development firm could conduct (or have a startup create an app to conduct) retail industry analyses of neighbourhood turnover rates by size of space. Business Improvement Areas could use this data to understand the economic impact of events or policy decisions.	*(Names are illustrative only and do not imply partnerships or endorsement.)* *Location mapping:* Innerspace, MappedIn *Space mapping:* A Retail Space, Chatter Research, Potloc *Space availability:* Booqd, Breather, Harbr, Piinpoint

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Core Digital Services That Others Can Build On

Sidewalk Labs' proposed service or application	What urban data it proposes to use and publish	Possible third-party applications that could build on this data	What existing ecosystem the innovation supports
Public realm maintenance map A proposed real-time map of public realm assets — from park benches to drinking fountains to landscaped gardens — would enable proactive maintenance and keep spaces in good condition. Draft for discussion purposes only	Evapotranspiration, plant health, moisture, waste bin volume Air quality, decibel meter (e.g. only volume level, not recording audio) Public realm asset location, usage, damage detection	Software developers could use this information to create automated maintenance services, such as precision agriculture systems or landscaping bots. Industrial manufacturers could use data on utility maintenance to identify more durable materials or component designs. City officials, business improvement districts, and others could this information to better schedule core operations, such as waste collection or green-space watering, to lower costs and improve quality of life. A parks researcher could use this information to understand the average use of expensive equipment like kayaks to inform inventory procurement decisions. City planners could use this information to understand the use and benefits of new equipment pilots.	*(Names are illustrative only and do not imply partnerships or endorsement.)* *Physical asset location:* Bench Mark, BeWhere Inc., Estimote, Tekt. *People flow:* Eco-counter, Numina, PeopleFlow. *Autonomous equipment:* BigMow, Husqvarna, Kobi. *Predictive maintenance:* AI Incorporated, Arable, Mero Technologies, Nanophyll, Opti, Plantix, Sensoterra.

Core Digital Services That Others Can Build On

Sidewalk Labs' proposed service or application	What urban data it proposes to use and publish	Possible third-party applications that could build on this data	What existing ecosystem the innovation supports
Open space usage and management (CommonSpace) A proposed digital application called CommonSpace (created with the local organization Park People and the Gehl Institute) would make it substantially easier, faster, and less expensive to collect more reliable data on how people use public spaces — helping park operators better respond to community needs.	Gehl public realm activity categories, usage counts (aggregated and non-personal), demographic details (extremely high-level and thus non-personal)	City planners, community groups, and others could use this information to research park spaces and equipment that show the highest use in different parks throughout the city. Community-based groups could develop planning apps and tools that allowed community members to better suggest park uses for all ages and abilities in their neighborhoods.	*(Names are illustrative only and do not imply partnerships or endorsement.)* *Open space management:* Range of government, non-profit, and community groups *Park operations:* Gehl Institute and other urban planning and design groups *City operations:* MySidewalk, Namara, Stae, and other platforms supporting city operations insights

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Core Digital Services That Others Can Build On

Sidewalk Labs' proposed service or application	What urban data it proposes to use and publish	Possible third-party applications that could build on this data	What existing ecosystem the innovation supports
Outcome-based building code This proposed real-time building code system could monitor noise, nuisances, and structural integrity to help a mix of uses thrive without sacrificing public safety or comfort.	Strain gauges, vibration, odor, sound pressure, decibel meter (e.g. only volume level, not recording audio), lead detection. Safety sensors: Sprinkler pipe pressure, fire pump diagnostics, emergency lighting diagnostics, heat, smoke, CO2, CO PM 2.5, PM10, VOC.	City government could use this information to develop new outcome-based regulatory systems for code compliance. City planners could use this information to develop new outcome-based zoning standards. Planning researchers could use this information to study the relationship between mixed-use development and local economic growth. City agencies or architectural groups could create apps to visualize building structural integrity issues.	*(Names are illustrative only and do not imply partnerships or endorsement.)* *Environmental collection:* Aclima, AQMesh, Awair, Concrete Sensor, Fibos, Koto Labs, Noiseaware, SafeHub. *Building outcomes mapping:* Black Arcs, Ratio City, Map Your Property.

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Thank You
Blue Jays
73

Pages 177 to 200
are withheld
pursuant to paragraphs
20(1)(b), 20(1)(c) and 20(1)(d)
of the *Access to Information Act*

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Les pages 177 à 200
font l'objet d'une exception totale
conformément aux dispositions des
paragraphes
20(1)(b), 20(1)(c) et 20(1)(d)
de la loi sur l'accès à l'information

WATERFRONToronto

December 8, 2018

WELCOME - Roundtable 4

Plenary Session

WATERFRONToronto

Louroz Mercader

Communications and Public Engagement Manager

Indigenous Land Acknowledgement

Agenda

Plenary Session: 9:30 - 10:30 am / 2:00 - 3:00 pm

- **Engagement Update**
- **City of Toronto:** Waterfront Secretariat
- **Waterfront Toronto:** Objectives and Evaluation
- **Sidewalk Labs:** Quayside: A New Neighbourhood

Breakout Sessions

1. **Quayside Site Plan & Transportation**
2. **Social Infrastructure / Housing Affordability**
3. **Digital Governance**
4. **Sustainability**

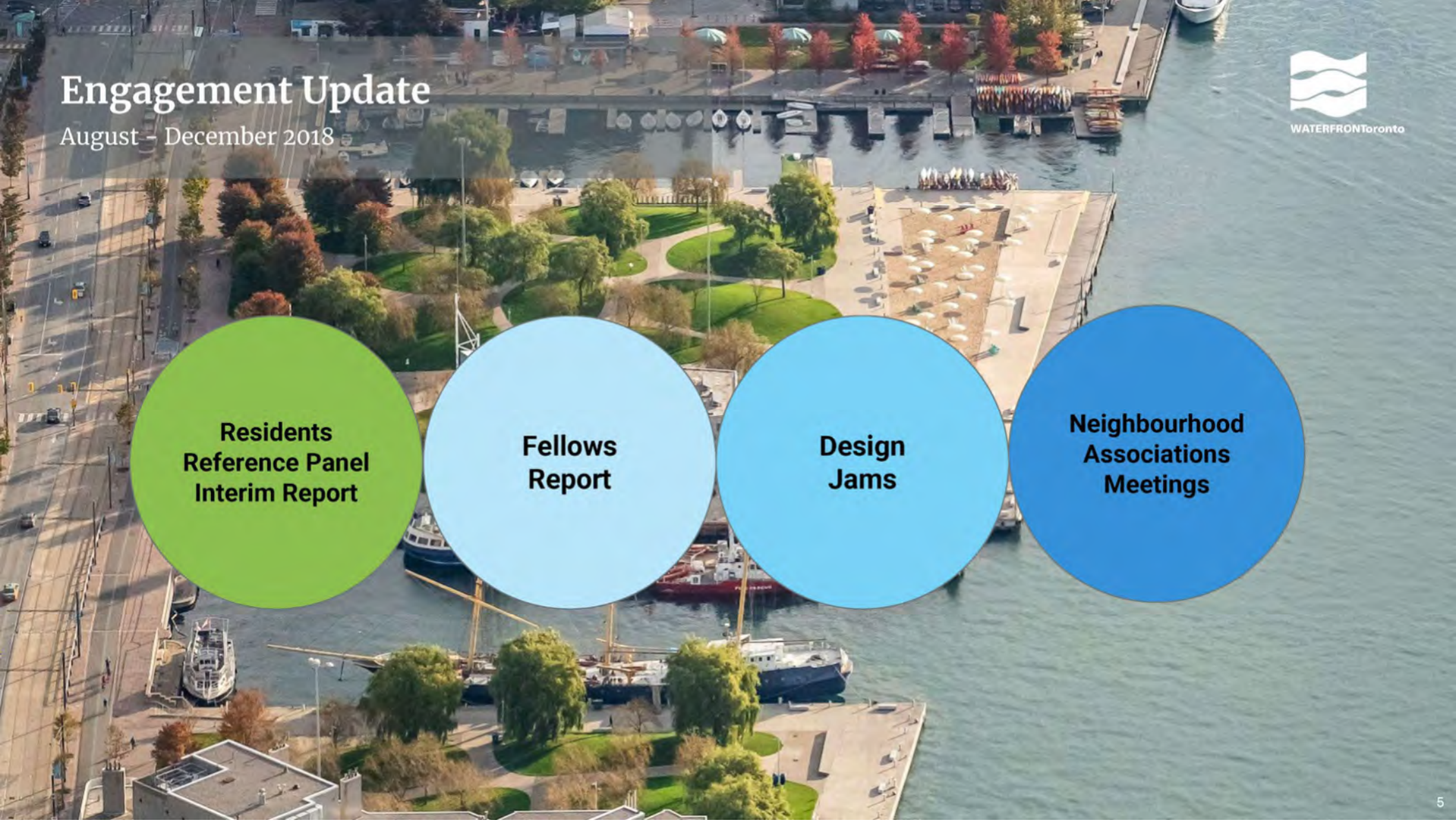
Morning Sessions	Afternoon Sessions
10:40 - 11:30 am	3:10 - 4:00 pm
11:40 - 12:30 pm	4:10 - 5:00 pm



Engagement Update

August - December 2018

WATERFRONToronto



5

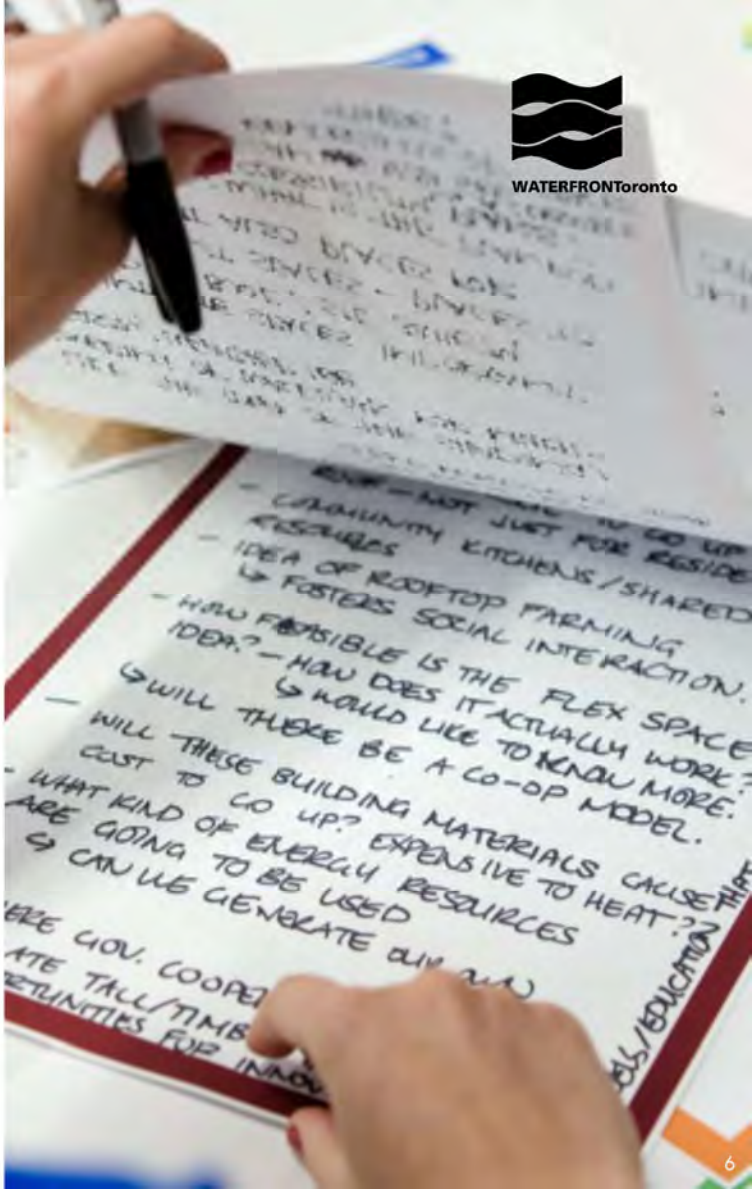
Engagement Update

Residents Panel Interim Report

- Identified guiding values of **Community**, **Inclusivity**, **Functional Beauty**, **Sustainability, Innovation**, and **Accountability**.

- Identified issues and opportunities in six areas:

  1. Public oversight and innovation
  2. An accessible and inclusive public realm
  3. Safe, efficient mobility options
  4. Responsible Data Use
  5. Being smart and sustainable
  6. Inclusive and affordable



Engagement Update

Fellows Final Report

- The Fellows issued their final report on November 8th, and it included **27 recommendations** based on their learnings from visits over the summer to Amsterdam, Copenhagen, Malmo, Boston, New York, and Vancouver.

- The report focused on **housing**, **public realm**, **design**, **data**, **public policy** and **governance**, and **mobility**.

- Recommendations included setting ambitious targets for affordable housing, detailed recommendations on a civic data trust, and doing more to partner with Indigenous communities in the design and programming of Quayside.



Engagement Update

Design Jams

- **Vertical Living** - addressed the experience of "isolation" in vertical living and workshopped a number of strategies to create connectivity and a sense of community.

- **Water Connections** - focus on the difficulty accessing the waterfront – highlighting the lack of physical access but also social barriers to being able to enjoying waterfront activities

- **People on Wheels** - safety can be achieved with an expansive, consistent, and reliable network of dedicated cycling lanes in the city—those that are made separate from motor vehicles with distinct markers

- Read the Summary Report: www.sidewalktoronto.ca



David Stonehouse

Director, Waterfront Secretariat, City of Toronto

WATERFRONToronto

Meg Davis

Chief Development Officer

WATERFRONToronto

Quayside Public Roundtable: December 8, 2018

Realizing the Waterfront's Potential:

Setting strong foundations for long-term economic, social, and environmental well-being



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Waterfront Toronto is working to revitalize the lands by Lake Ontario, transforming past industrial sites into **thriving neighbourhoods** that support **economic vitality** and enhance **quality of life**.

Our mandate comes from the three orders of government; our resources come from both public and private sources.

As we work on behalf of Torontonians, Ontarians, and all Canadians, every decision we make is guided by our vision of **one vibrant waterfront that belongs to everyone**.

Waterfront Toronto's Roles



Catalyst and Steward

Creating enduring value through well-designed and vibrant cultural, recreational, civic and public spaces



Revitalization Lead / Landowner

Advancing Complete Communities that address the need for housing, mobility, accessibility, connectivity and inclusivity



Partner

Leveraging innovation and partnerships to deliver economic growth and jobs

Public Accountability

WATERFRONToronto



Reducing urban sprawl



Building sustainable communities



Increasing affordable housing



Creating parks & public spaces



Expanding public transit



Driving economic competitiveness

Key Corporate Metrics

Corporate Social Responsibility and Sustainability Report

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Environment

- 24 LEED® Gold or LEED® Platinum Certified buildings (completed or underway)
- Important flood protection unlocking land for revitalization, enhancing the surrounding natural ecology and improving resiliency
- Resiliency and Innovation Framework for Sustainability that sets the bar even higher for waterfront revitalization in the years ahead



Social

- 496 affordable units completed, 80 nearing completion, planning another 1,000 in the West Don Lands and East Bayfront — all with ultra-high speed internet access
- Over 13km of waterfront trails and promenades
- Over 36 hectares of parks and public spaces



Economic

- $1.6 billion investment in waterfront renewal has created:
  - $4.1 billion in economic output for the Canadian economy
  - $848 million in revenue to government
  - 14,100 full-time person years of employment
  - Increased and accelerated private sector investment

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Quayside

Evaluating the Master Innovation and Development Plan

Quayside RFP Objectives

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Sustainability, Resiliency and Urban Innovation:

Create a globally significant demonstration project that advances a new market model for climate-positive urban developments

Complete Communities:

Establish a complete community that emphasizes quality of place, and provides a range of housing types for families of all sizes and income levels within a robust mix of uses, including public open space, culture, recreation, vibrant retail, education-related activities and offices

Economic Development and Prosperity:

Provide a testbed for Canada's cleantech, building materials and broader innovation-driven sectors to support their growth and competitiveness in global markets

Partnership and Investment:

Develop a new partnership model that ensures a solid financial foundation, manages financial risk and secures revenue that funds future phases of waterfront revitalization

Quayside in the context of the Designated Waterfront Area

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Quayside

A new type of mixed-use, complete community

Quayside potential to become a global hub for urban innovation

Evaluating the MIDP

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When the Master Innovation and Development Plan (MIDP) is submitted to Waterfront Toronto by Sidewalk Labs, that is not the end of this process but still near the beginning:

- We undertook a thorough, fair and transparent process in selecting Sidewalk Labs as the Innovation and Funding Partner for Quayside.
- Our evaluation of the MIDP will be equally thorough and demanding, in order to determine if the MIDP should move forward.
- The innovation we are seeking must serve the public interest, fulfill our aspirations and meet the requirements we have set for Quayside.
- The whole plan will be evaluated by Waterfront Toronto, and, to be implemented, individual components will be subject to city approvals, as well as federal and provincial regulations.
- Should the MIDP move forward, there will be a series of additional agreements and consultation will continue.

Building the Evaluation Framework

The framework for the evaluation will look at how the MIDP addresses three overall questions:

1. *How many of our goals and objectives does the MIDP meet, and how well does it meet those targets?*

2. *Does the MIDP align with the planning framework for the waterfront?*

3. *Is the proposed business plan viable and in the public interest?*

Waterfront Toronto's evaluation will include an integrated and collaborative due diligence and review process with external experts.

Process to Refining Goals and Objectives

The Goals and Objectives for Quayside were developed through a robust and thoughtful five step process. We have linked a number of Waterfront Toronto's long-standing objectives: **Corporate Objectives, RFP Objectives, key Government Policy Objectives, and detailed Priorities.**

The result is a detailed list of MIDP Goals and Objectives, which also benefited from third party due diligence review.

1. Corporate Objectives
2. RFP Objectives
3. Government Policy & Strategy Review
4. Waterfront Toronto Priorities
5. 3rd Party Due Diligence and Metrics work



Waterfront Toronto's Goals and Objectives:

- → Key elements of the Evaluation Framework
- → Waterfront Toronto defines the "what", Sidewalk Labs proposes the "how"

Waterfront Toronto took a thoughtful and reasoned approach in developing these objectives, focusing on identifying priority outcomes—rather than preferred tactics to achieve said outcomes—with as few prescriptive requirements as possible.

Evaluation Framework

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Waterfront Toronto has established:
(more detailed information is available on our website)

Goals and Objectives:

- Job Creation and Economic Development
- Sustainability and Climate Positive Development
- Housing Affordability
- Mobility and Transit
- Urban Innovation
- Buildings
- Complete Communities
- Public Realm

Implementation Requirements:

- Data Privacy and Digital Governance
- Public Engagement
- Local Developer Participation
- Design Excellence
- Partnership Model

Establishing a list of implementation requirements the MIDP must address

MIDP Priority Outcomes

Of these Goals and Objectives, Waterfront Toronto has identified five overarching Priority Outcomes:



- Job Creation and Economic Development
- Sustainability and Climate Positive Development
- Housing Affordability
- New Mobility
- Urban Innovation

Robust Data Privacy and Digital Governance are central to success and to the realization of all Goals and Objectives

Implementation Requirements

Waterfront Toronto's evaluation framework established a series of critical fronts, and a list of implementation requirements the MIDP "**Must Do**" in the following areas:

- **Data Privacy and Digital Governance**
- **Public Engagement**
- **Local Developer Participation**
- **Design Excellence**
- **Partnership Model**

Implementation Requirements

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Data Privacy and Digital Governance

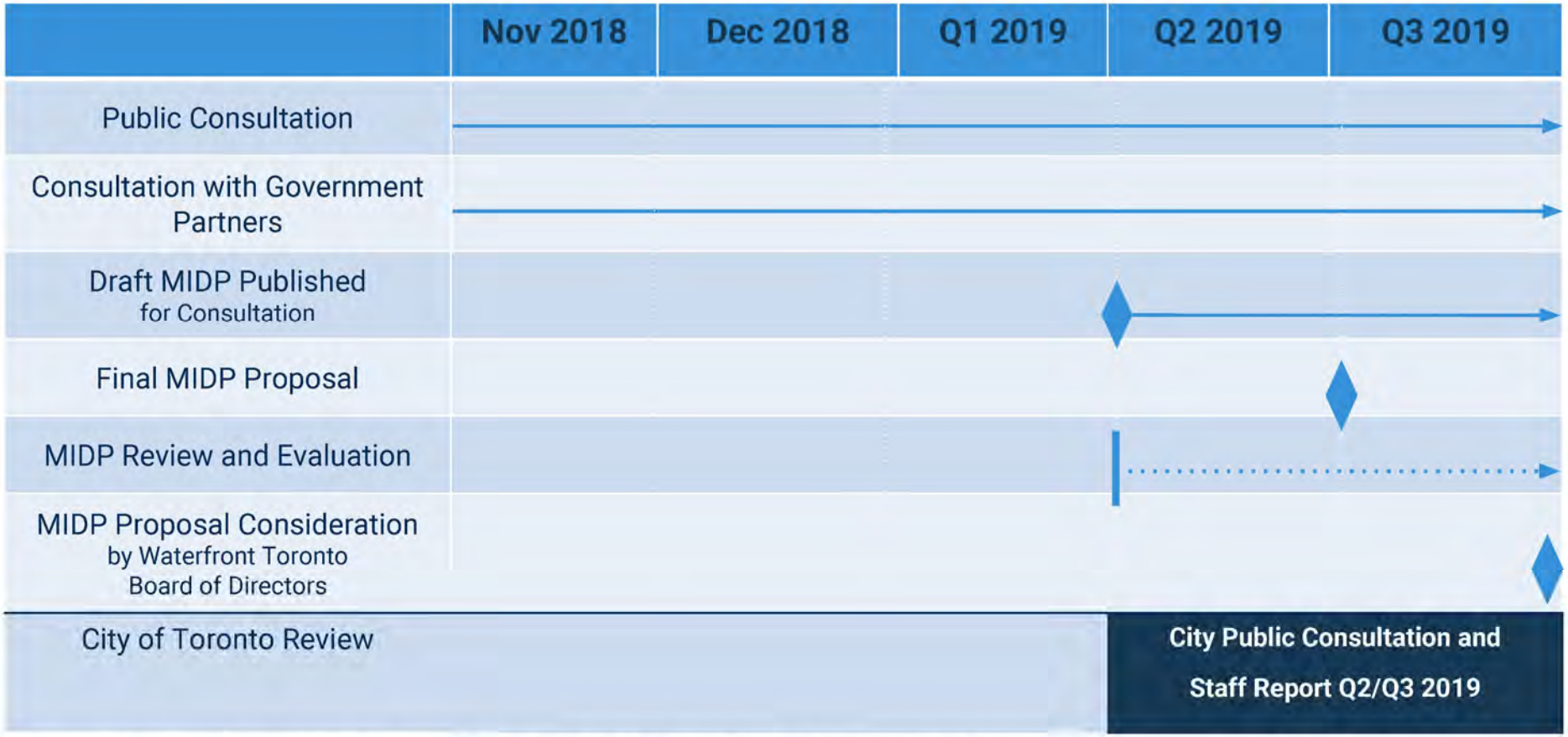
- Proposals for approaches to protocols that could inform **a new global standard in data governance**
- **Compliance** with or exceedance of all applicable laws, regulations, policy documents and contractual obligations
- Methods and practices that provide for **meaningful consent** for data collection
- **Data Minimization**
  - Processing should only use as much data as is required.
  - Data collected can only be used for the initial purpose collected. Further uses require additional consent.
- **Data security and privacy**
  - Commitment to not share or link personal data with 3rd parties - including other Alphabet companies (i.e. Google) without consent
  - Data **cannot** be used for advertising purposes
  - Privacy by Design embedded in all solutions proposed
  - Architecture that ensures protection against the unauthorized access or data corruption throughout its lifecycle
- **Commitment and accountability to the ethical** use of technology
- **Shared Benefits of Data** – Data and solutions will be open where feasible and appropriate. Data will be shared with government open data repositories to ensure equitable access and opportunity to benefit.

Evaluating the Evaluation

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- Accountability and transparency remain at the core of Waterfront Toronto
- Feedback has informed our evaluation plan, objectives and criteria
- Before we receive the MIDP, our evaluation criteria, objectives, and priorities will be considered by:
  - ✓ the community, including the Quayside Stakeholder Advisory Committee
  - ✓ our government partners
  - ✓ Waterfront Toronto's Digital Strategy Advisory Panel
  - ✓ Waterfront Toronto's Board of Directors and Investment, Real Estate and Quayside Committee

Current MIDP Timeline



Note: Should the MIDP receive all of the needed approvals, we would move towards implementation agreements and continue consultation with all stakeholders


a waterfront for everyone
WATERFRONTtoronto


SIDEWALK TORONTO
Jesse Shapins
Sidewalk Labs
30


SIDEWALK TORONTO
Creating
Neighbourhoods
31

Sidewalk Labs – Why We Are Here

SIDEWALK TORONTO

SIDE WALK LABS

We aim to combine world-class urban design with cutting-edge technology to set new standards for sustainability, affordability, and economic opportunity for Torontonians of all incomes, abilities, and ages.

Quality of Life for All

Community Well-Being

The physical environment influences everyday life and its design plays an important role in supporting community well-being, enhancing quality of life and enabling healthy lifestyles.

Diversity, Equity & Inclusion

Inclusive communities and economic growth require a commitment to values of diversity, equity and inclusion.

Sidewalk Toronto is planning a neighbourhood where all are welcome and have an opportunity to flourish and thrive.



Sidewalk Labs Role

Essential Catalyst

Foundational & Sustainable Infrastructure	Improved Quality of Life Accessible to All	Sustainable Economic Development	Limited Real Estate Development
Providing essential infrastructure that the market alone will not yet provide.	Providing innovative digital services and design principles that enable quality-of-life improvements for Torontonians and Canadians.	Catalyzing new jobs with core anchors and conditions for third-party innovation.	Developing real estate in the early phases until ideas are proven out.

Waterfront Toronto's Evaluation Framework for the MIDP



WATERFRONT TORONTO KEY OBJECTIVES

Priority Outcomes and "Must Do's" for the MIDP

- Job Creation
- Climate Positive
- Housing Affordability
- New Mobility
- Data Privacy & Digital Governance

New Jobs and Economic Development

Growth on the Waterfront must support Toronto's need for continued economic success and growth in employment. Spaces that support this and catalysts that drive it are both needed.

Growing new and nascent Canadian industries

1



Tall Timber Industry

Bringing together and growing eco-systems

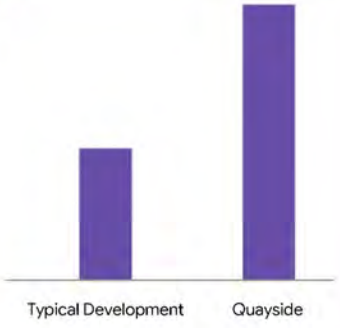
2



Urban Innovation Cluster

More non-residential uses

3



Non-residential Uses

New lower-floor typology for small businesses

4



"Stoa" Ground Floor

75%-85% Reduction in GHG emissions

Sidewalk Labs will invest in a series of innovations that drastically reduce greenhouse gas (GHG) emissions below levels in comparable projects, enable smarter management of resources, and reduce the cost of future upgrade and maintenance.

Getting around with fewer emissions

1



Increased transit and active transportation rides

Clean energy and smart energy management

2 Thermal Grid

3 Advanced Power Grid

4 Building Construction meeting Toronto Green Standards - Tier 3

5 Building Equipment Schedulers

Creating greener buildings with new materials and methods

6



Sustainable Construction and Materials

Collecting and managing waste and water more effectively

7



Smart Waste Management

8



Active Water Management

40% Below-Market Housing

The housing program mix at Quayside is specifically designed to address the housing gridlock facing the city today. It will provide options and opportunities to more Torontonians, enabling an inclusive complete community on the waterfront.

Exceed affordable targets and expand housing options

1. **20% affordable and 20% middle-income**
2. **50% purpose-built rental housing**
3. **New housing options,** including co-living, family housing, shared equity

Reduce construction costs with new technology and innovative design

4. 
Factory construction of buildings

5. 
Efficient Units

Design and provide services for all ages and abilities

6. 
Family-supportive design; options to age in place

7. 
Accessible Design

Dedicate spaces for community uses

8. Expanded All-Ages Public Realm

9. 
Social Infrastructure; Arts, Health, Education and Civic Engagement spaces

Reducing Congestion & Improving Safety

Rapid urban growth is making it harder to get around, but support for transit and innovations in mobility management offer opportunities to help people and goods move easily.

Transit-priority and transit-first

1



LRT Expansion

Safer streets designed to evolve with emerging technologies

2



Adaptive Traffic Signals and Dynamic Curb Management

Multi-modal options that rival car ownership

3



Exceptional bike and pedestrian infrastructure

4

Mobility as a Shared Service

New last mile delivery system

5



Freight Consolidation Center

Must Do - Data Privacy & Digital Governance

Toronto is rapidly becoming a major tech hub, and Canada's long-standing commitment to privacy and civic impact is the foundation upon which new innovation is developing.

Consistent with all Laws and Ethical Use of Technology

1

RDIA
Responsible Data Impact Assessment Process



Proposals that could inform a new global standard in data governance

2

Civic Data Trust



Publicly Accessible by Default and No Vendor Lock-In

3

Published Standards



Data security and privacy

4 No sharing personal data with third parties, including other Alphabet companies, unless with explicit consent

5 Data cannot be used for advertising purposes.

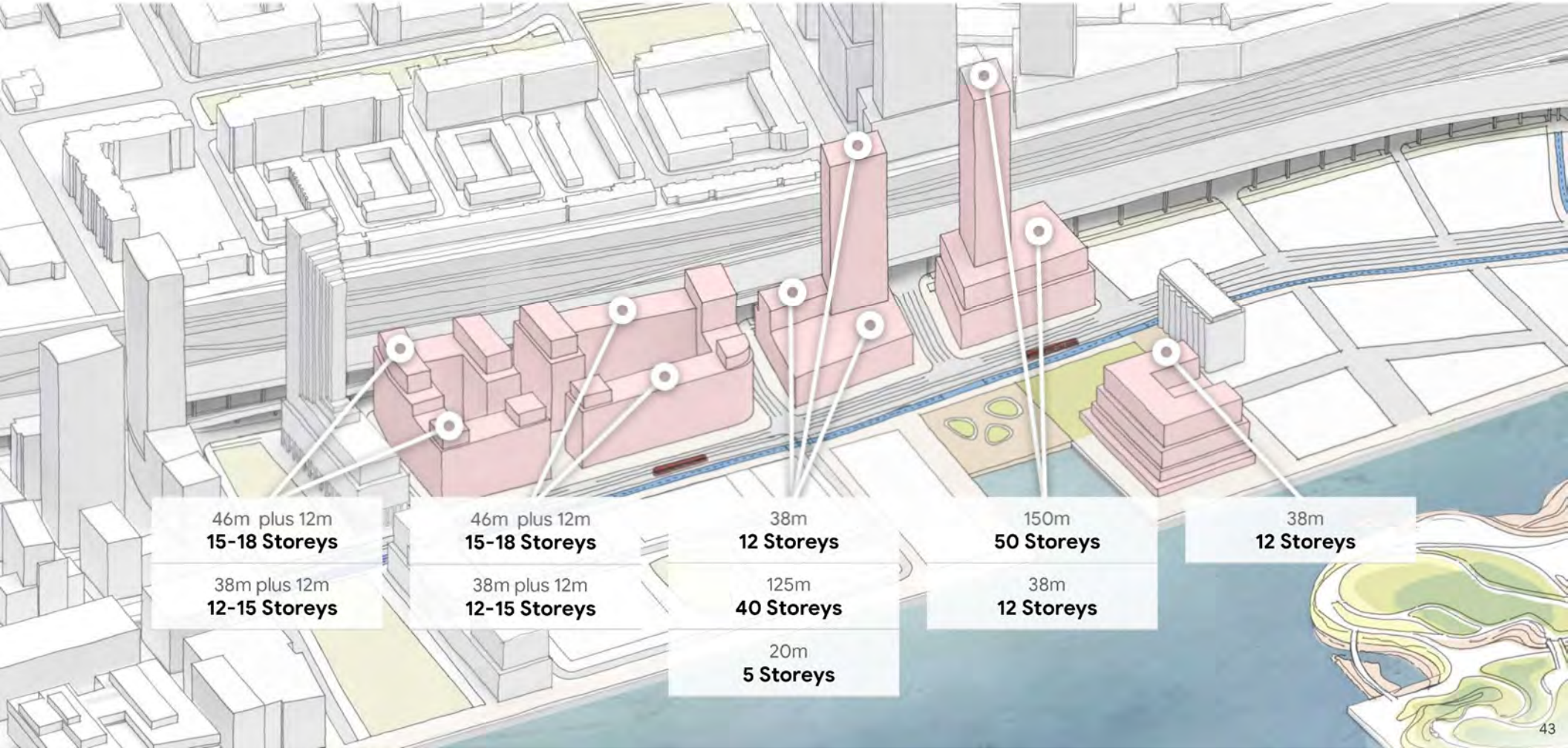
6 Privacy by Design embedded in all solutions


SIDEWALK TORONTO
Quayside
A New Neighbourhood
41

Quayside Precinct Plan Is Itself a Convergence



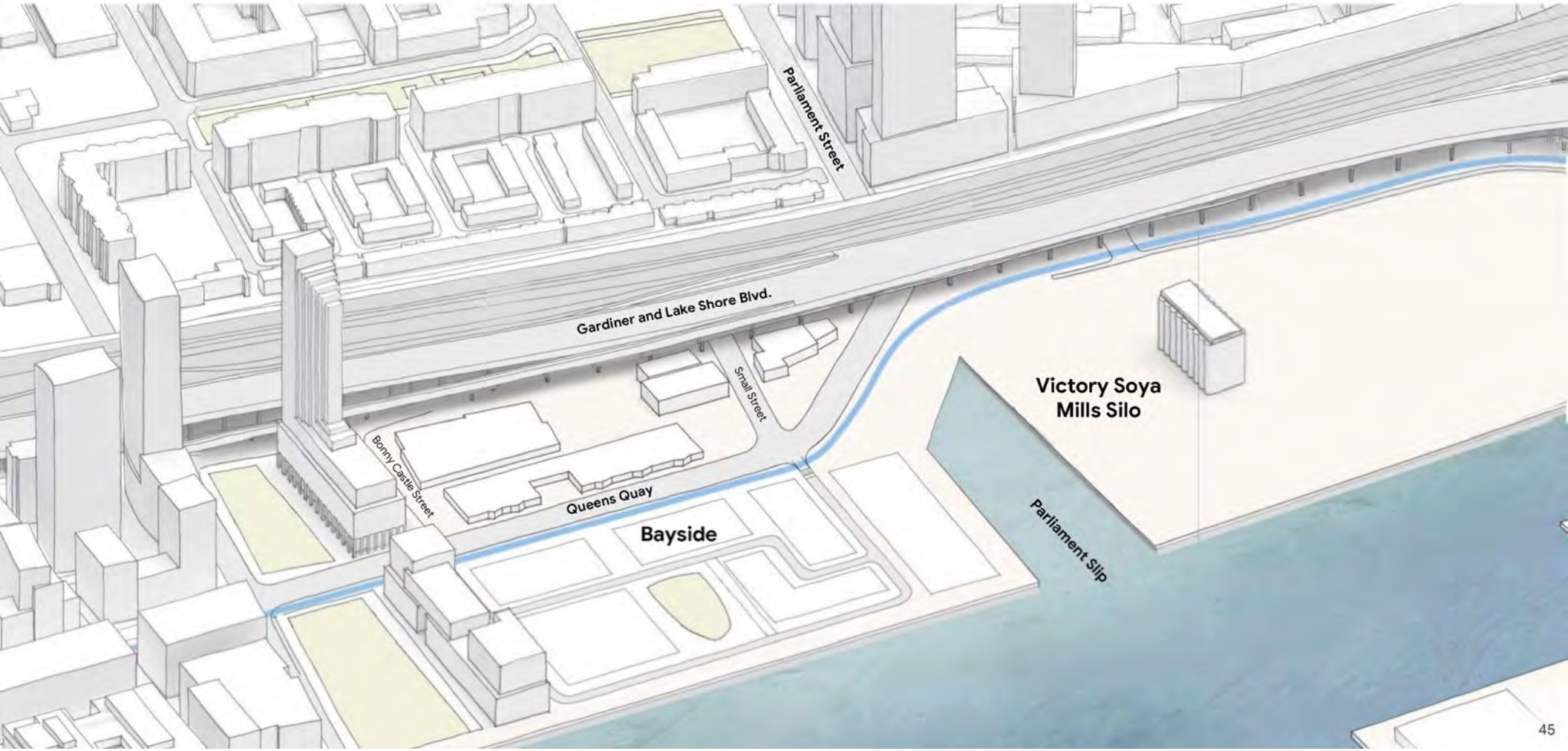
Quayside: Current Zoning Permissions (Height + Massing)



Quayside among Toronto's Downtown and East Neighbourhoods

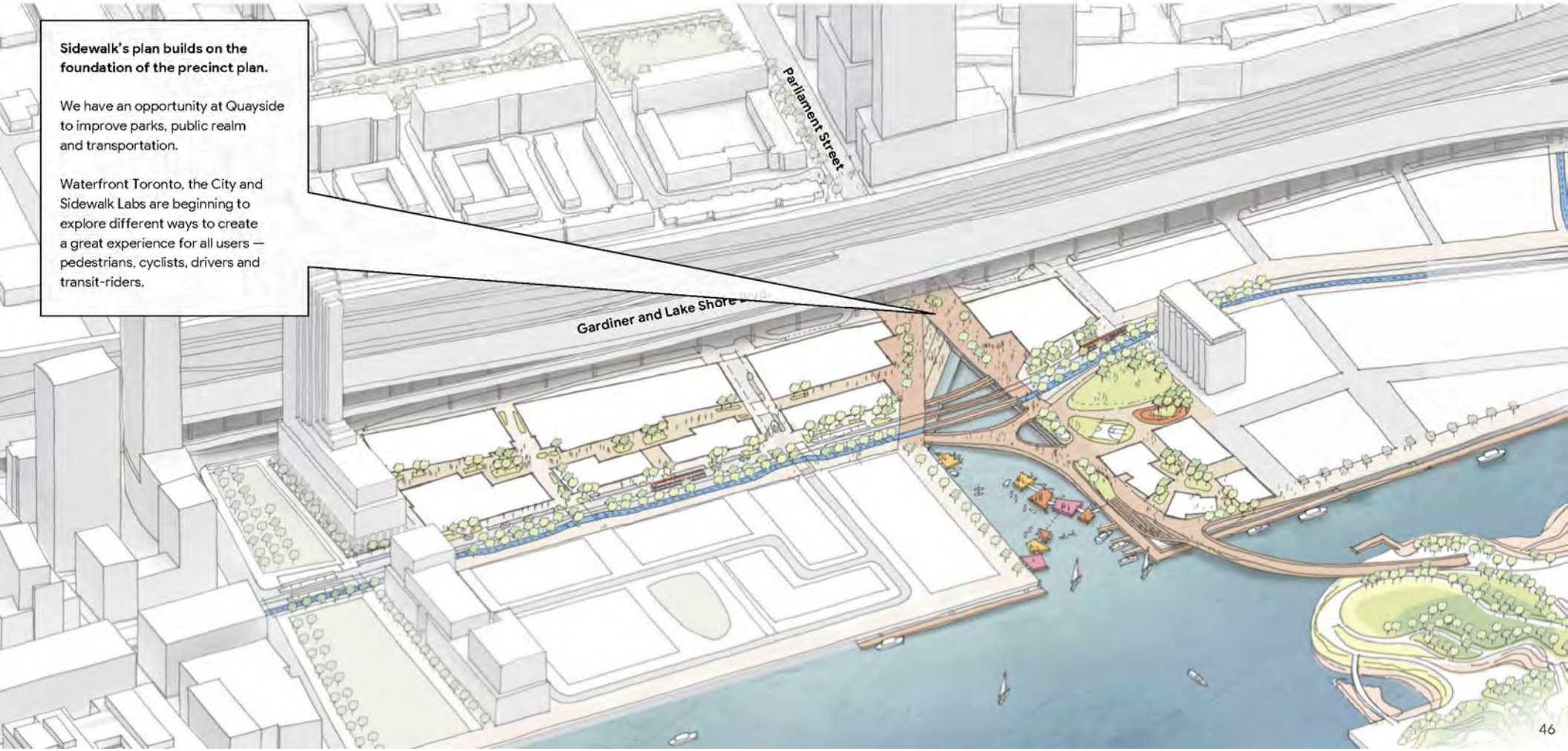


Quayside: Today



Quayside: People-first Streets and Public Realm

SIDEWALK TORONTO

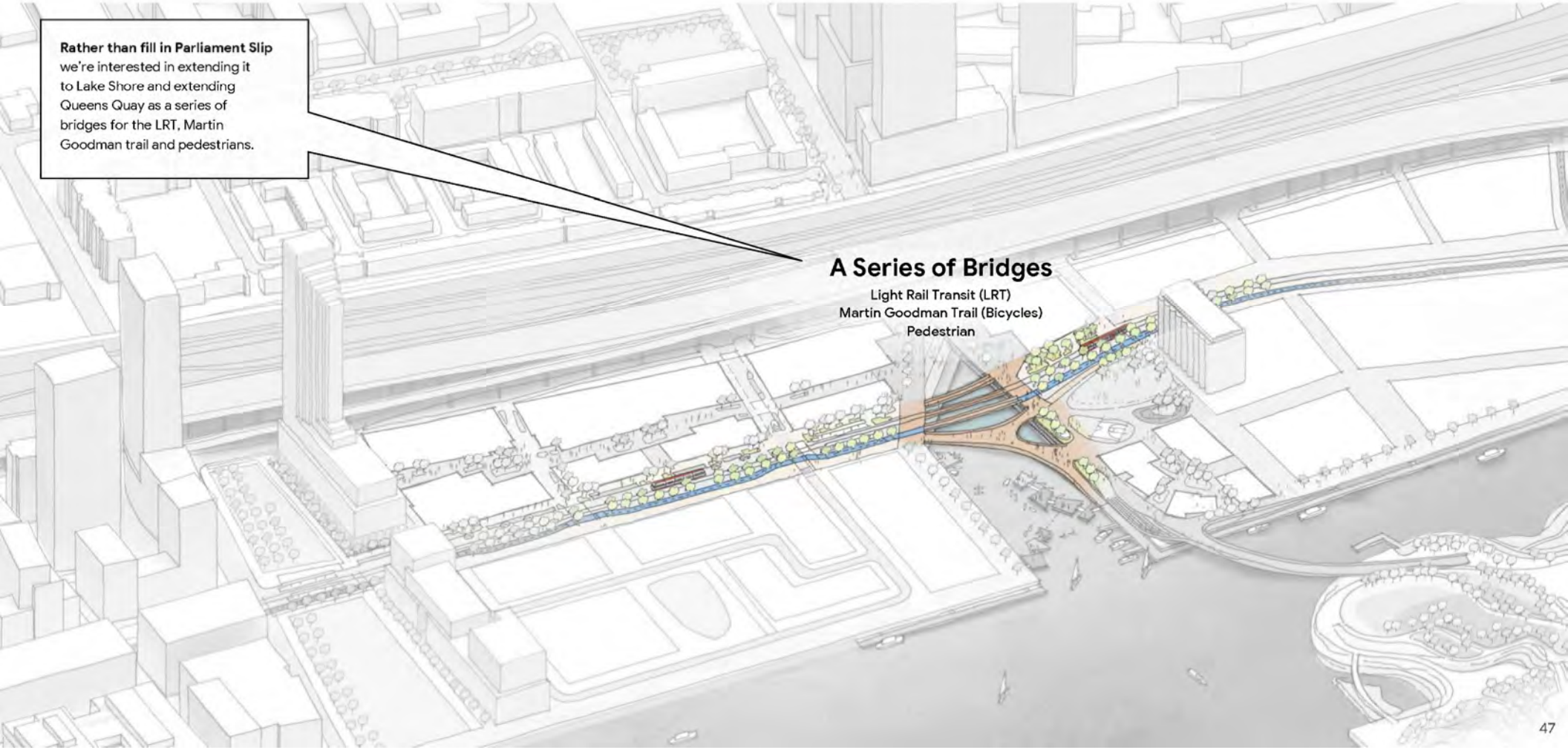


Sidewalk's plan builds on the foundation of the precinct plan.

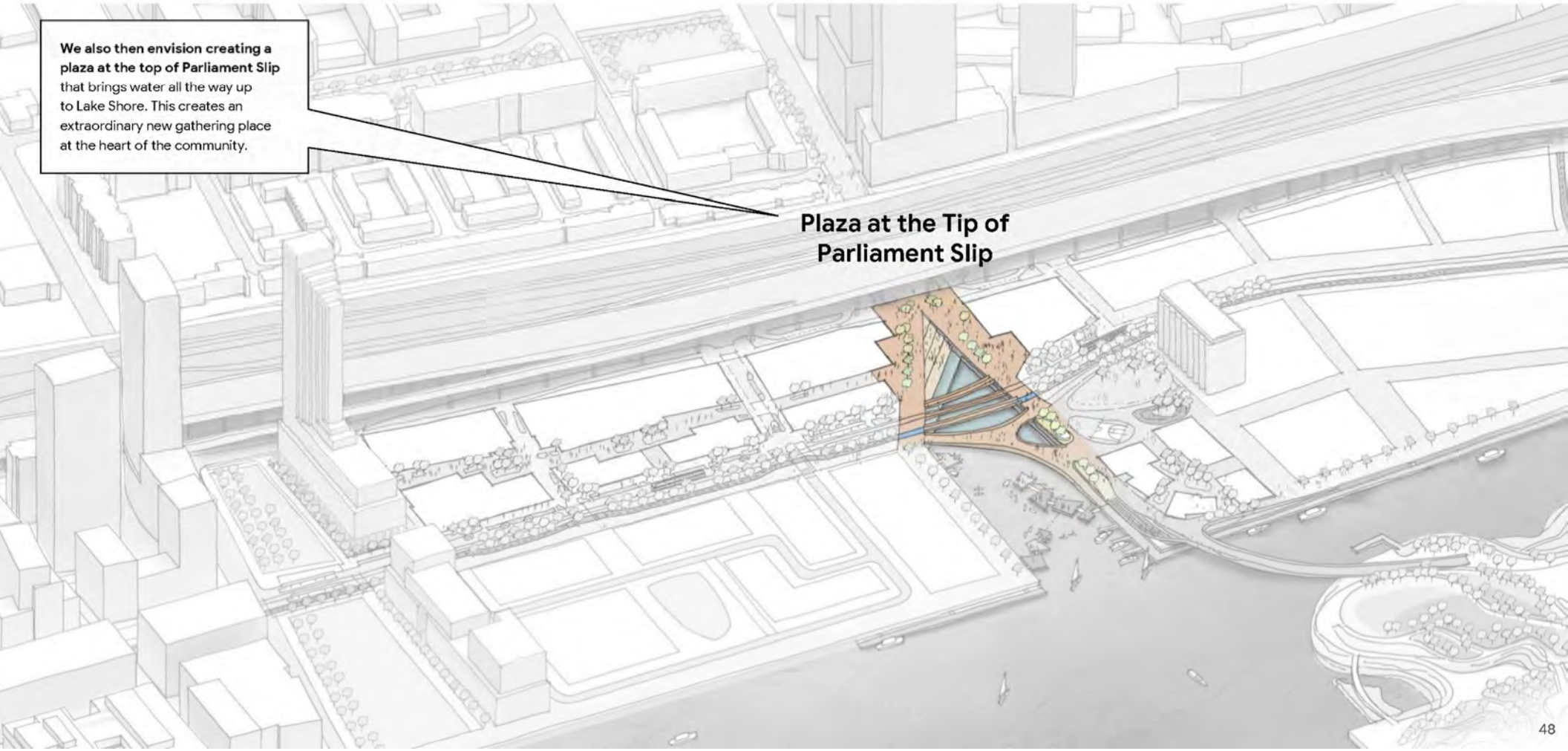
We have an opportunity at Quayside to improve parks, public realm and transportation.

Waterfront Toronto, the City and Sidewalk Labs are beginning to explore different ways to create a great experience for all users — pedestrians, cyclists, drivers and transit-riders.

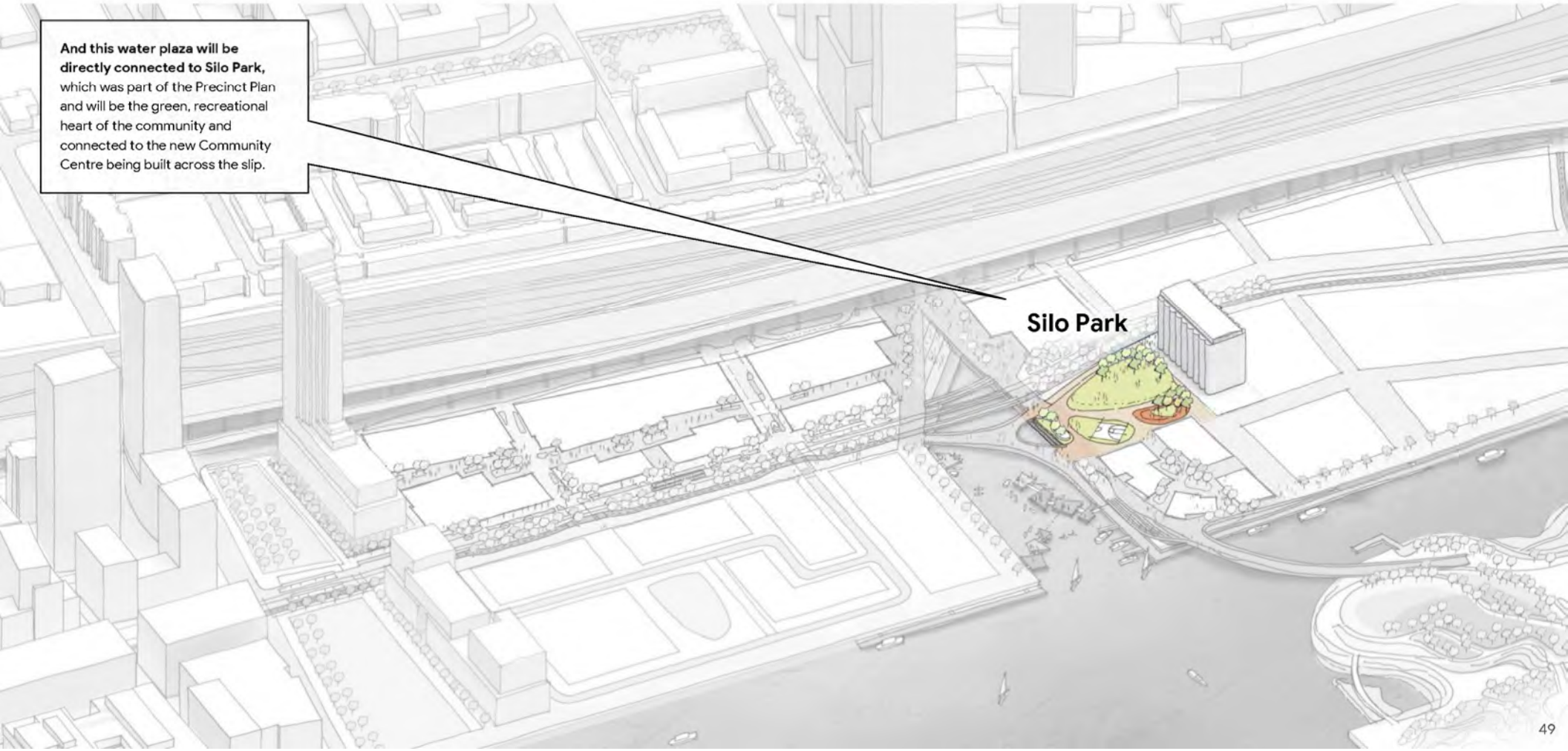
Quayside: People-first Streets and Public Realm



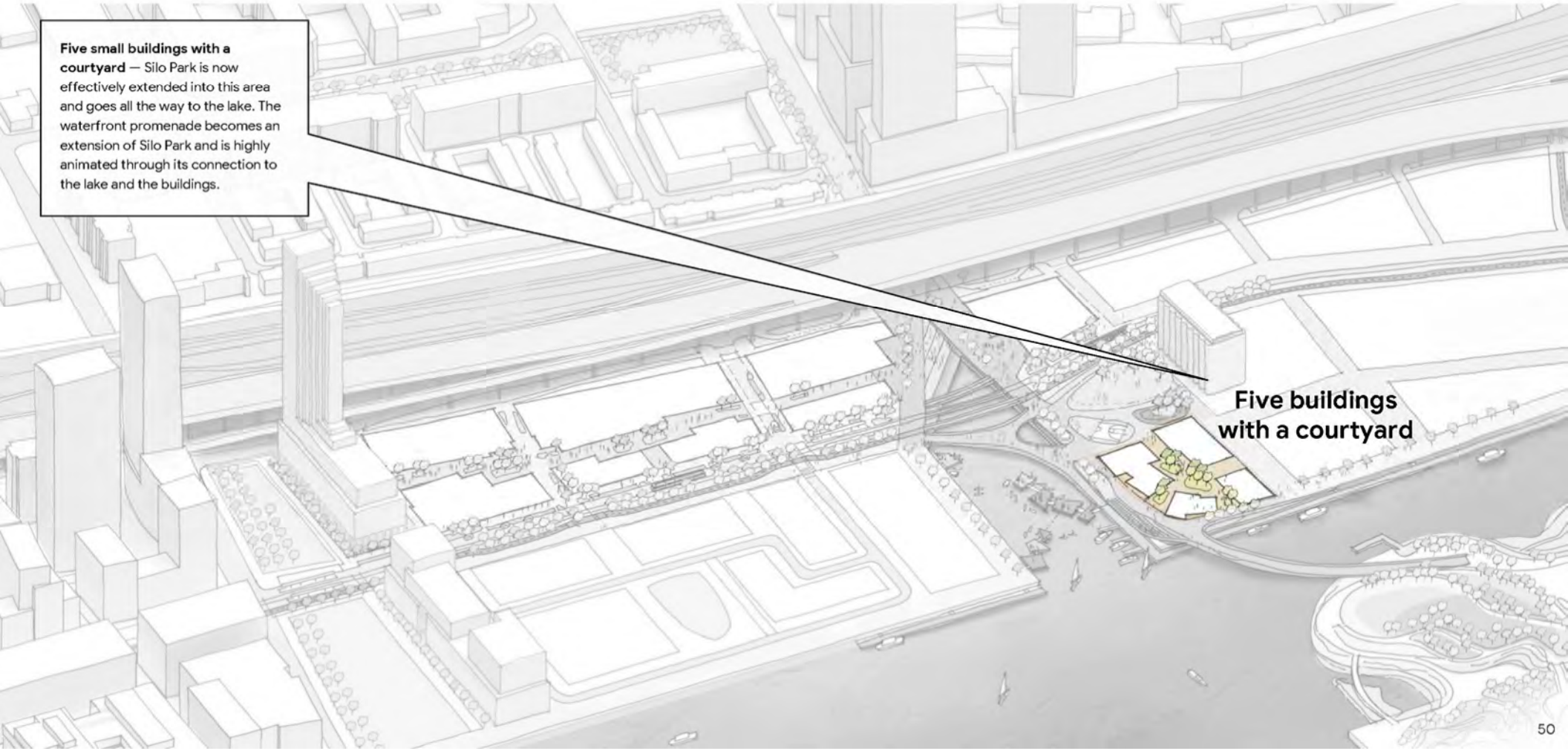
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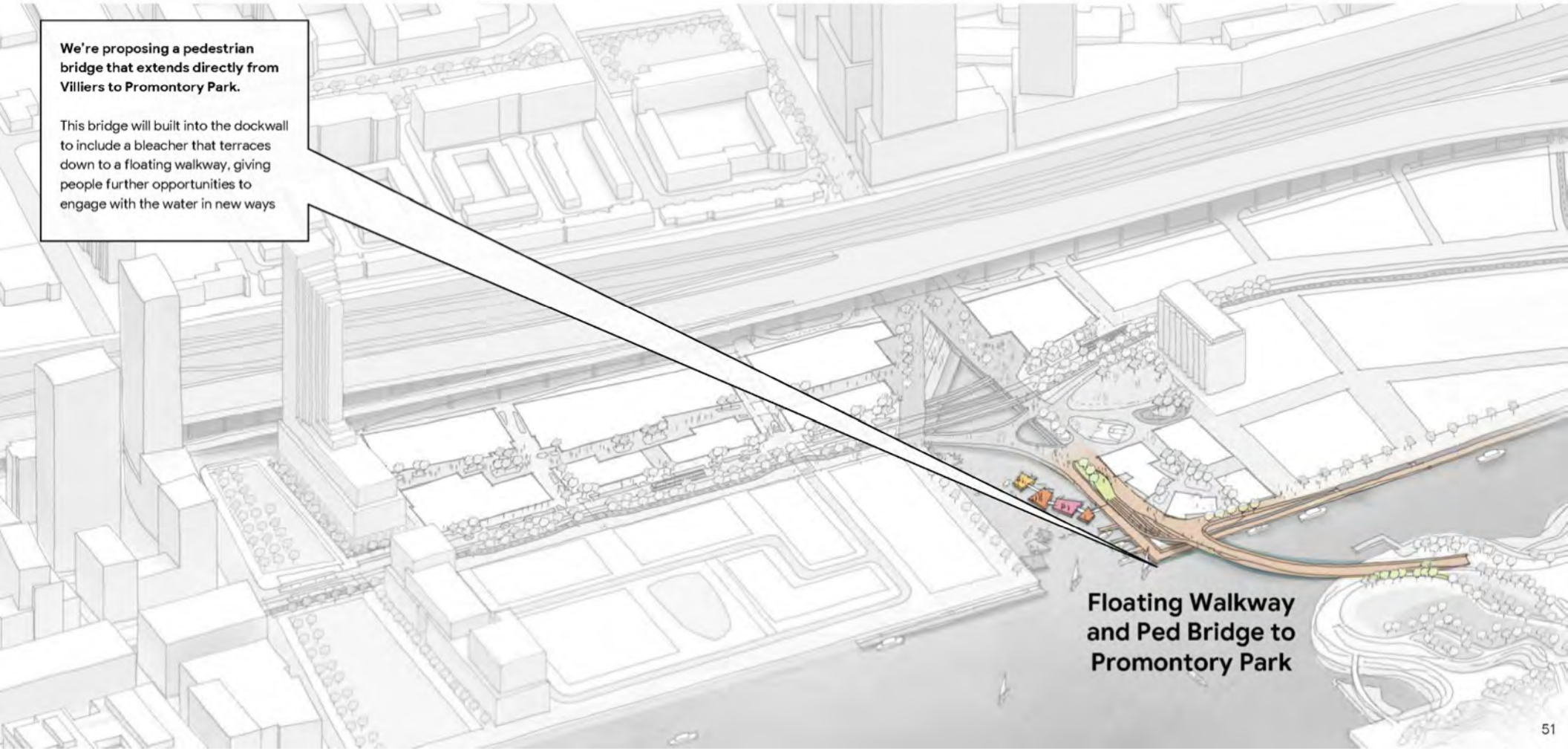
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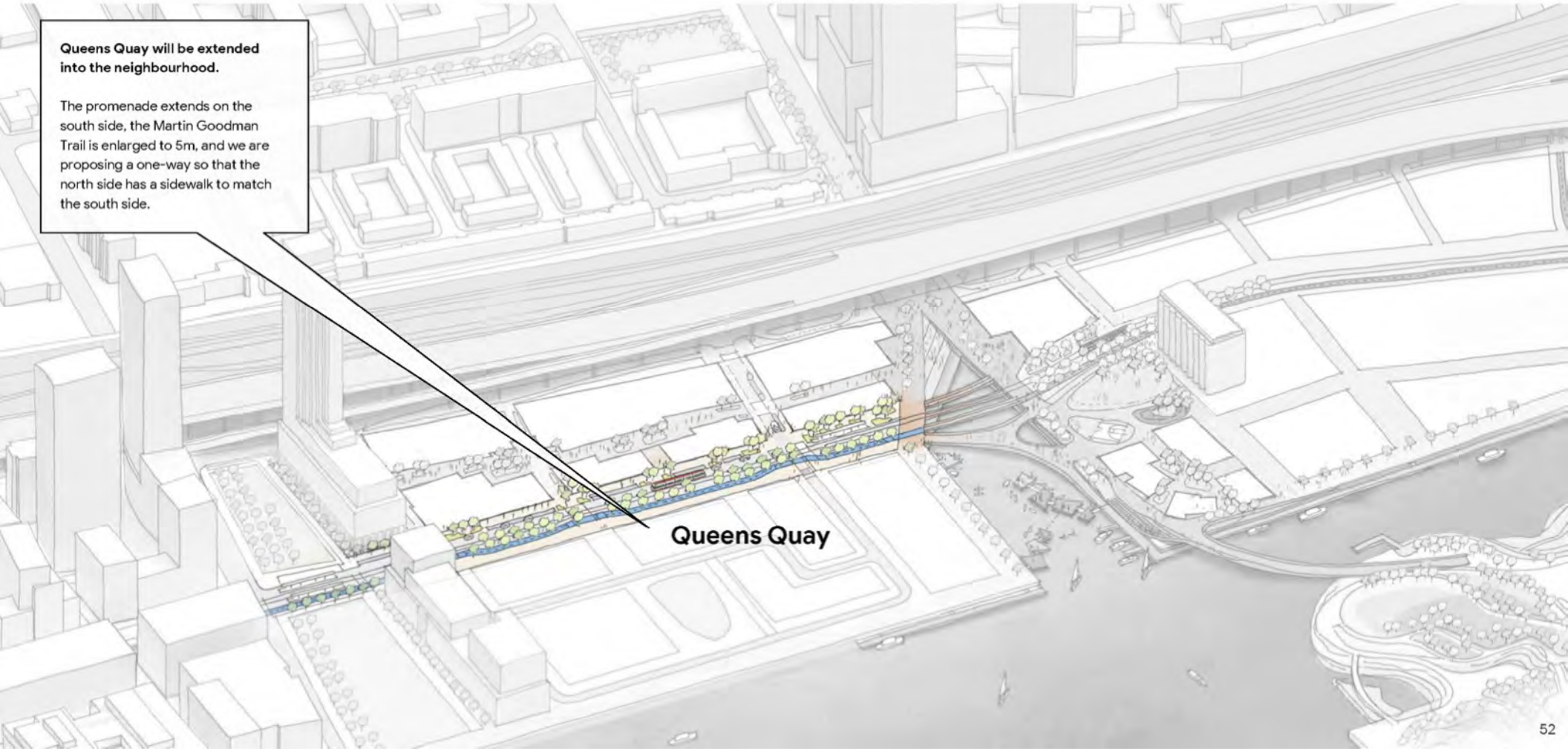
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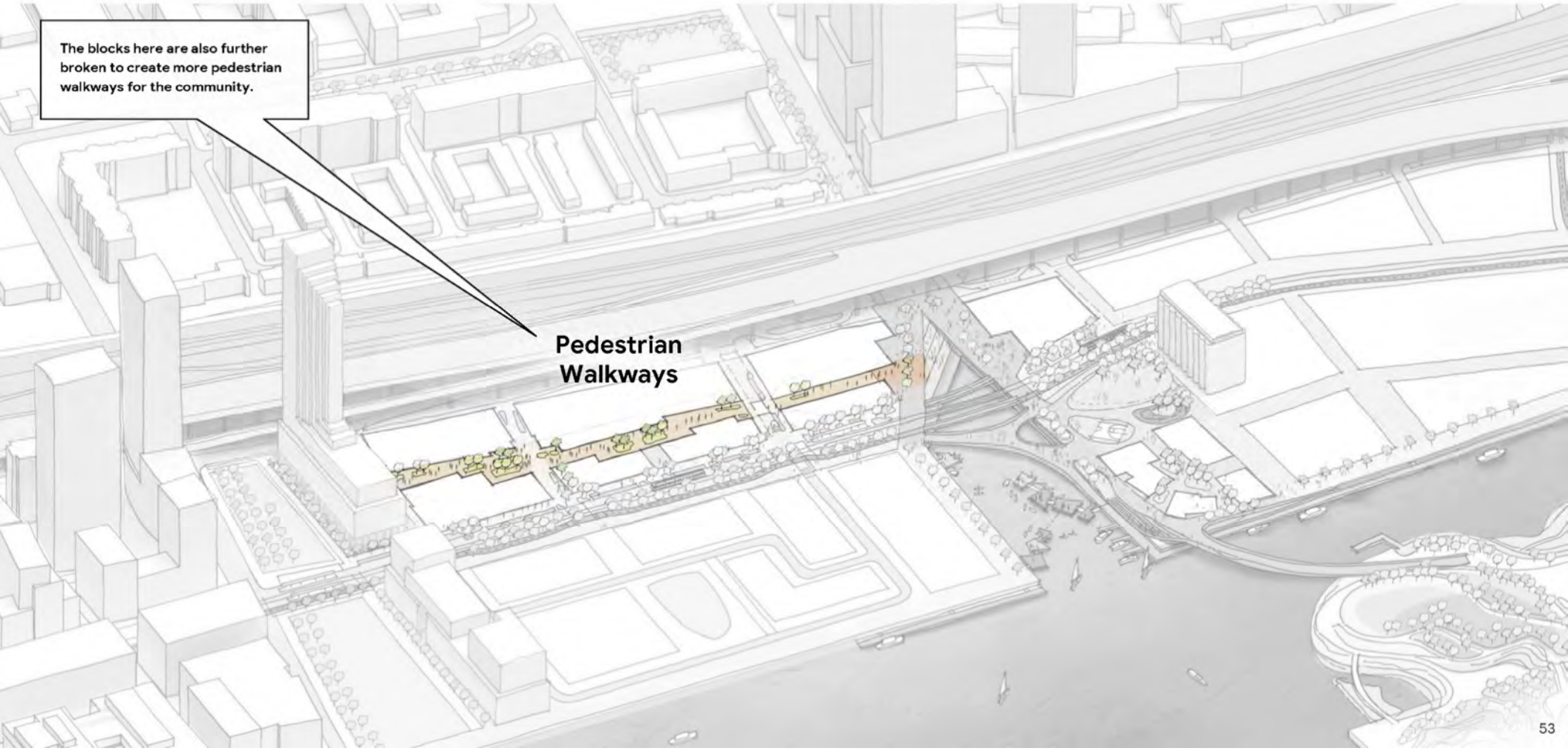
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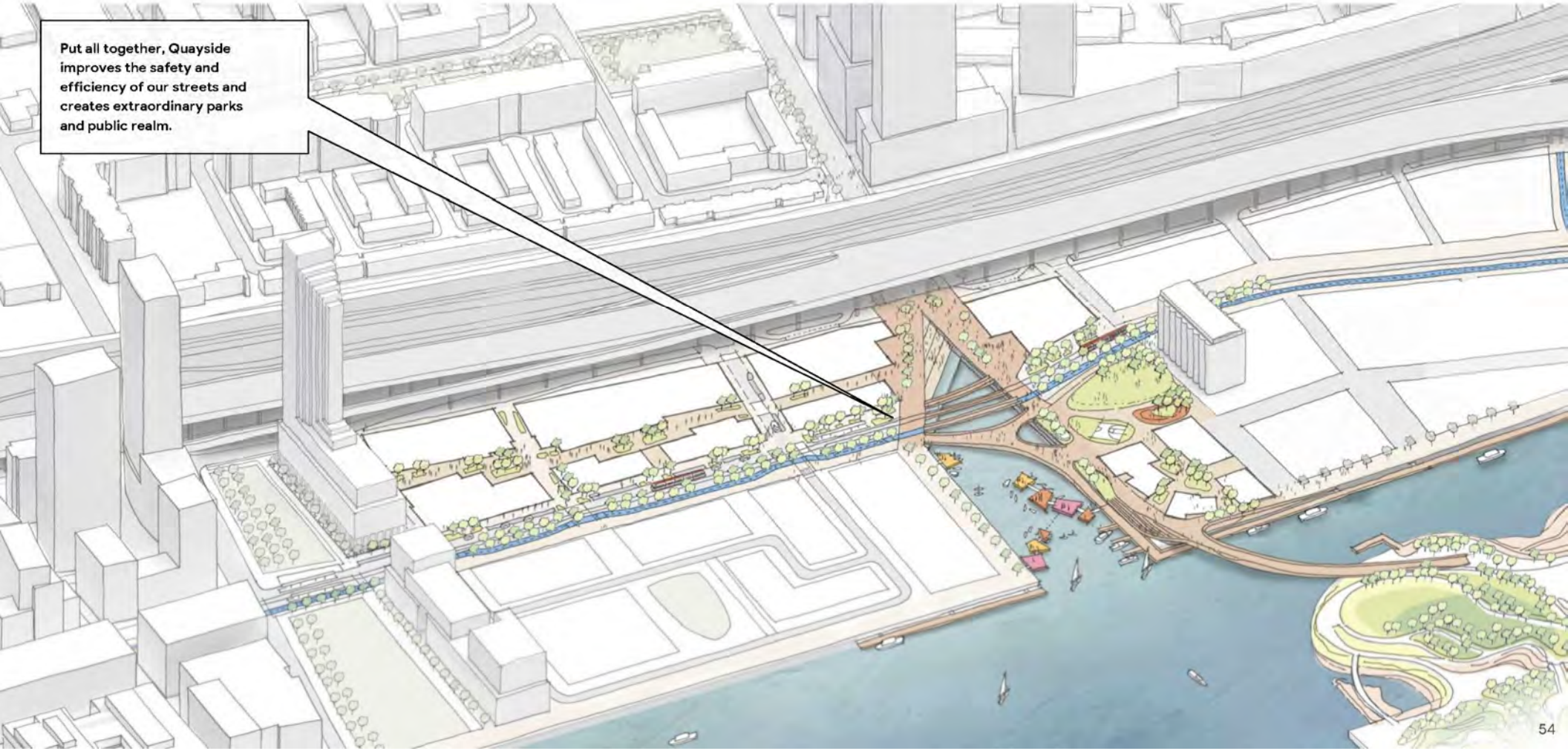
Quayside: People-first Streets and Public Realm



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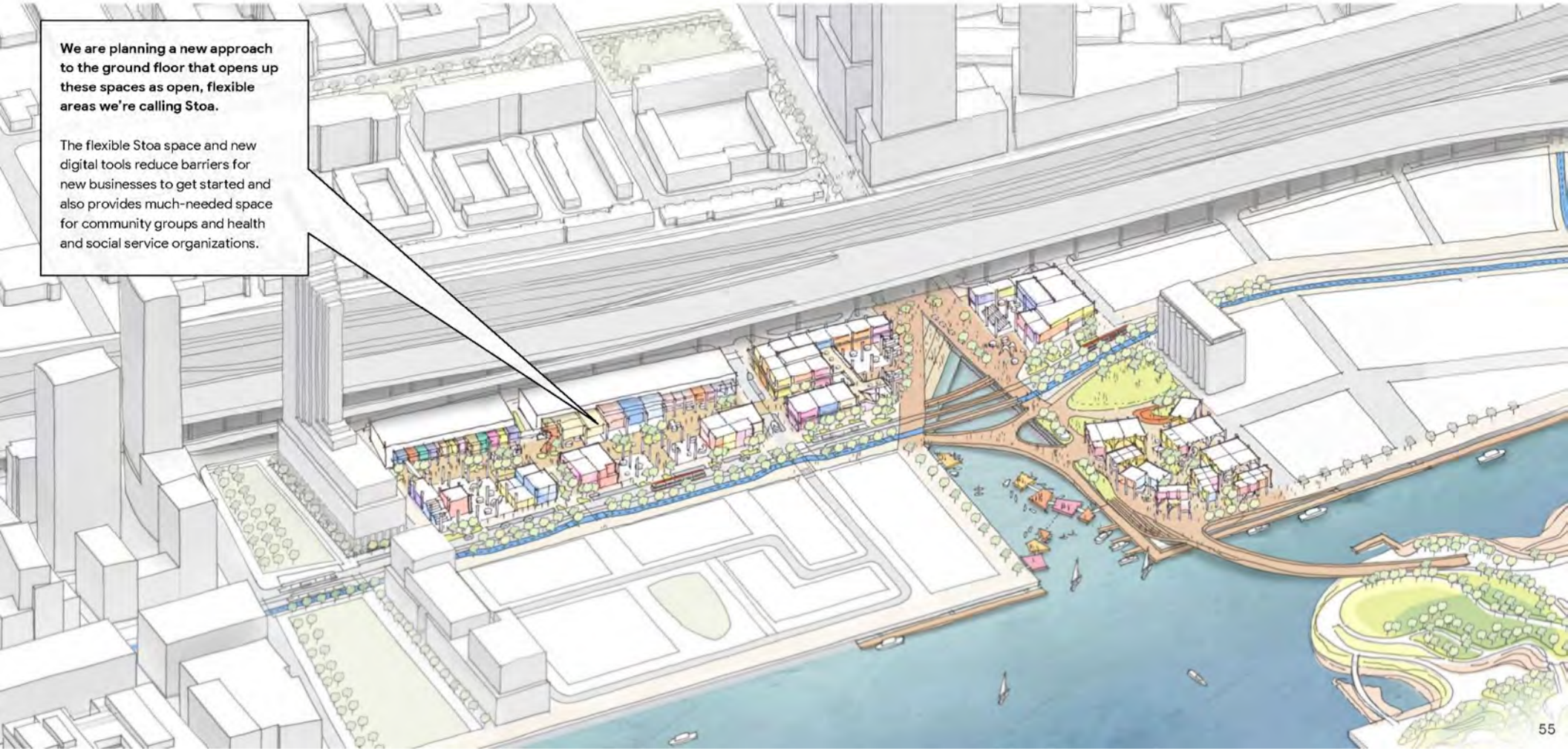


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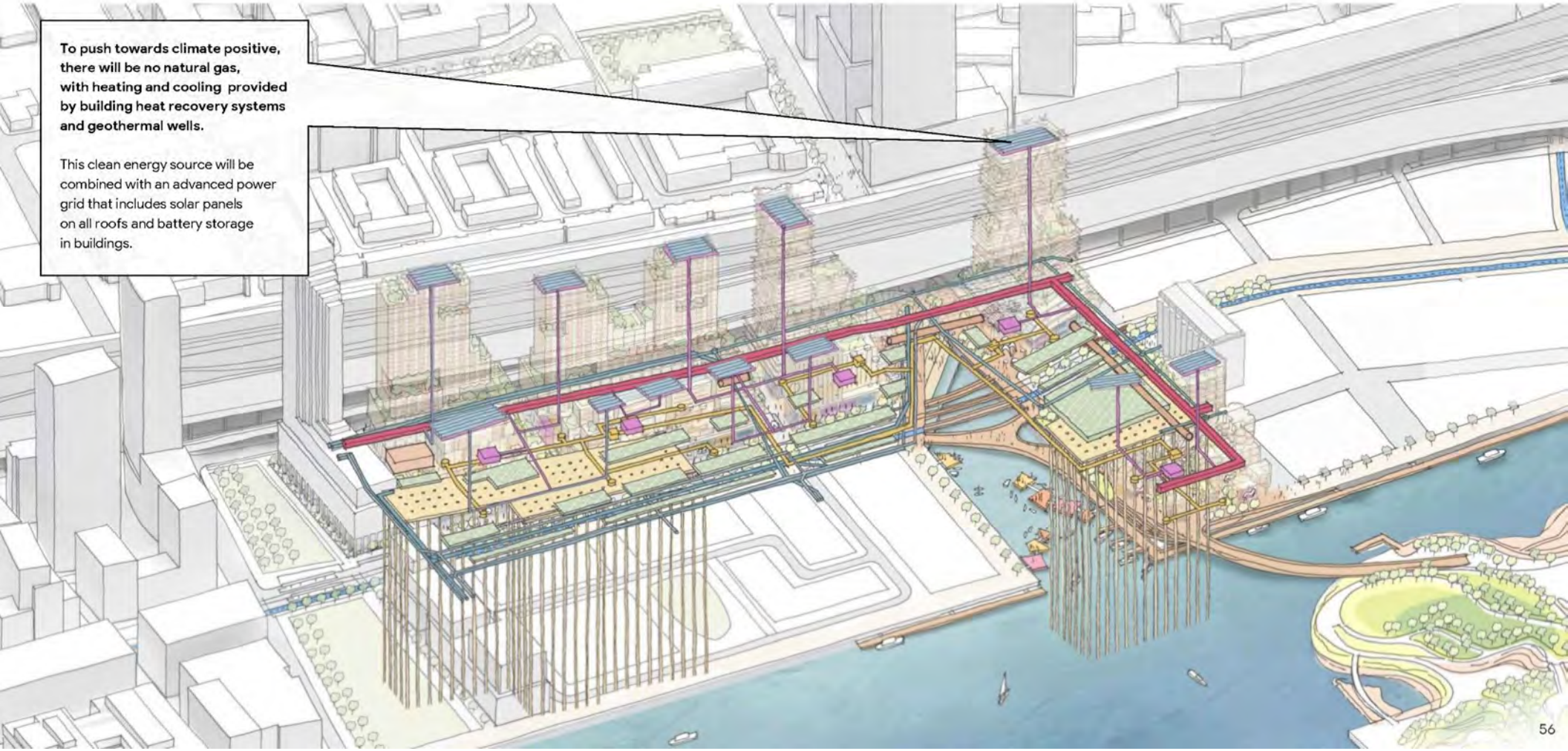
Quayside: Animating Ground Floor Spaces

SIDEWALK TORONTO



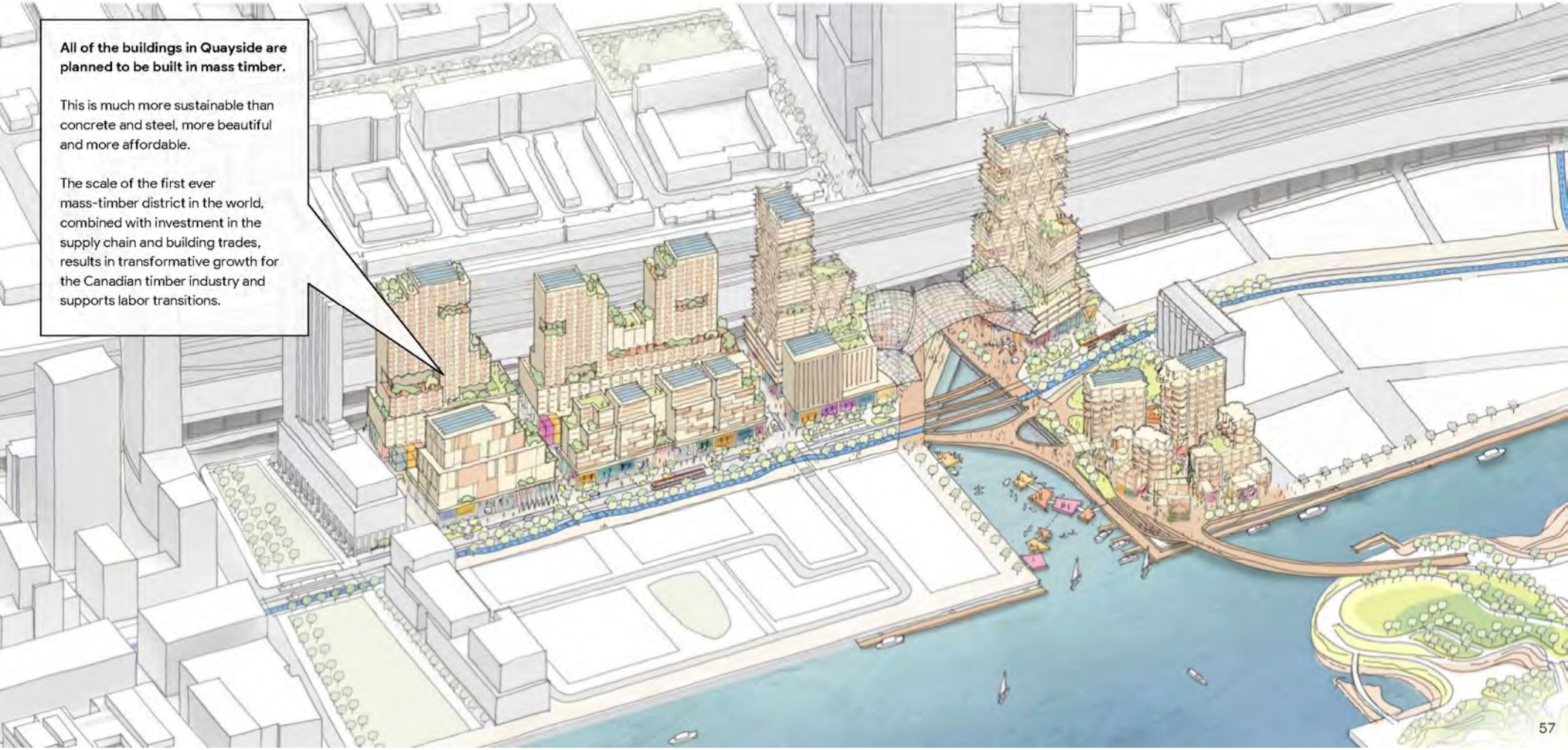
Quayside: Providing Sustainable Infrastructure

SIDEWALK TORONTO

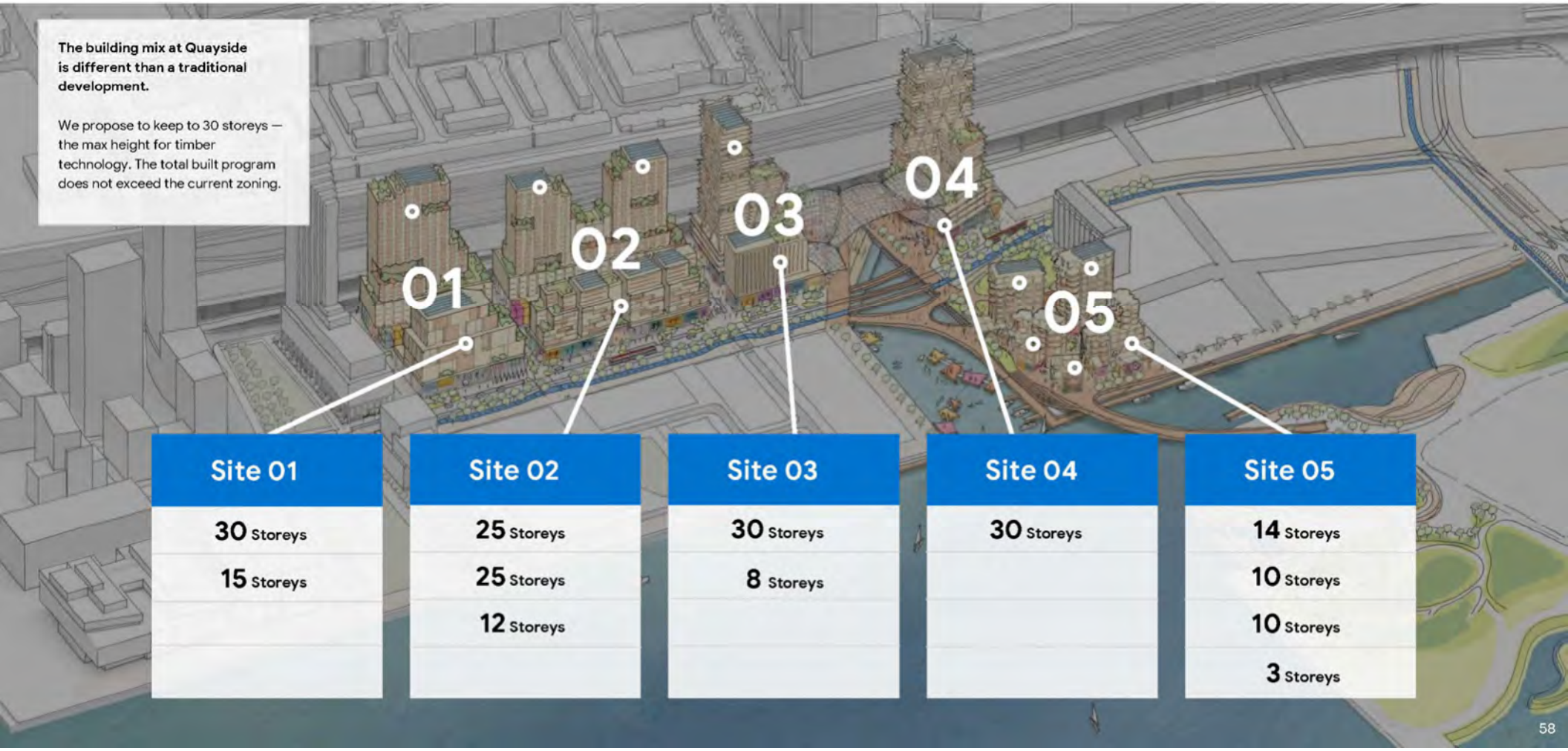


Quayside: Building Mass Timber

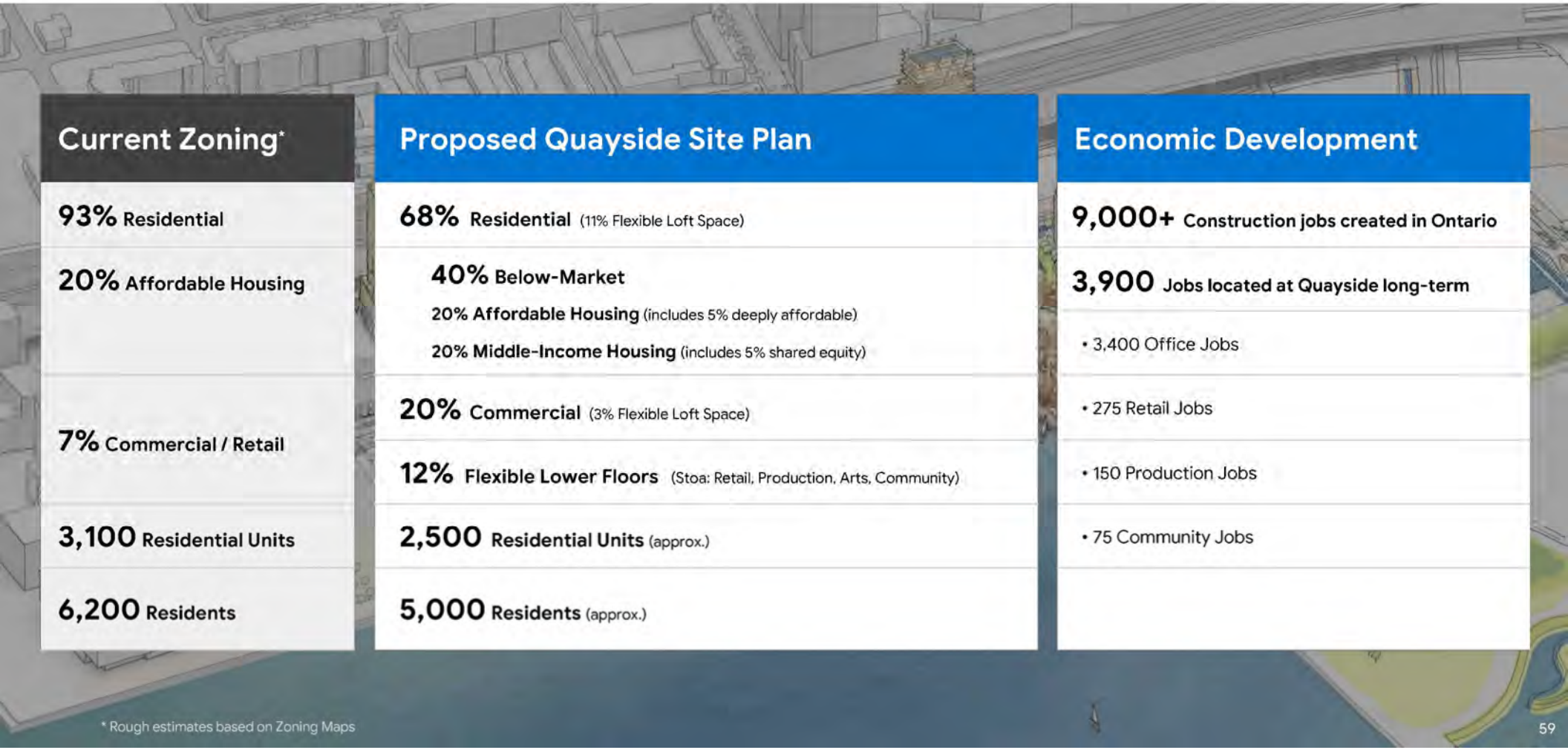
SIDEWALK TORONTO



Draft Quayside Plan: Proposed Program Density up to 3.3M SF



Quayside Program: Proposed Program Density up to 3.3M SF



Current Zoning*	Proposed Quayside Site Plan	Economic Development
93% Residential	**68%** Residential (11% Flexible Loft Space)	**9,000+** Construction jobs created in Ontario
20% Affordable Housing	**40%** Below-Market **20% Affordable Housing** (includes 5% deeply affordable) **20% Middle-Income Housing** (includes 5% shared equity)	**3,900** Jobs located at Quayside long-term
7% Commercial / Retail	**20%** Commercial (3% Flexible Loft Space)	• 3,400 Office Jobs
3,100 Residential Units	**12%** Flexible Lower Floors (Stoa: Retail, Production, Arts, Community)	• 275 Retail Jobs
6,200 Residents	**2,500** Residential Units (approx.)	• 150 Production Jobs
	5,000 Residents (approx.)	• 75 Community Jobs

* Rough estimates based on Zoning Maps

Commitment to More Housing Options

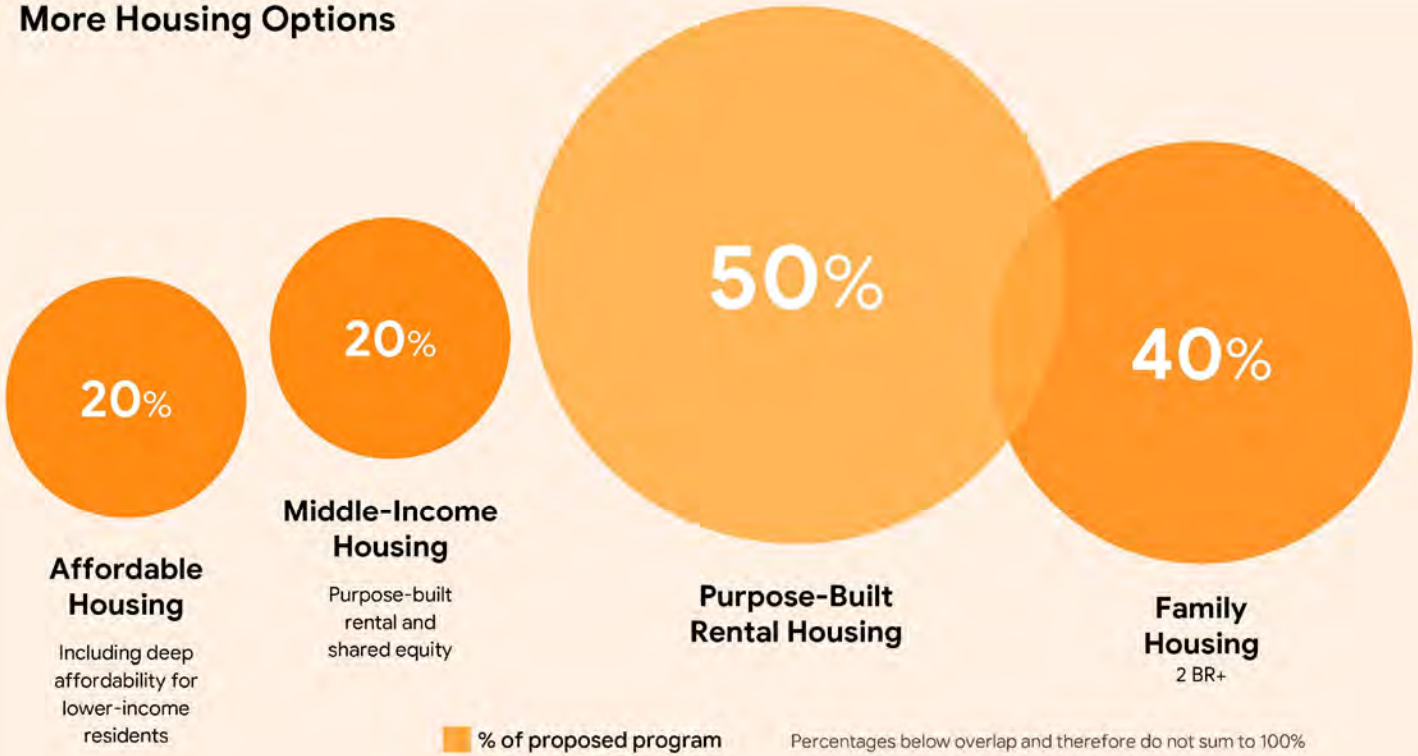
The Quayside affordable housing program mix will demonstrate a new approach and serve a much broader portion of the population.

More Affordability

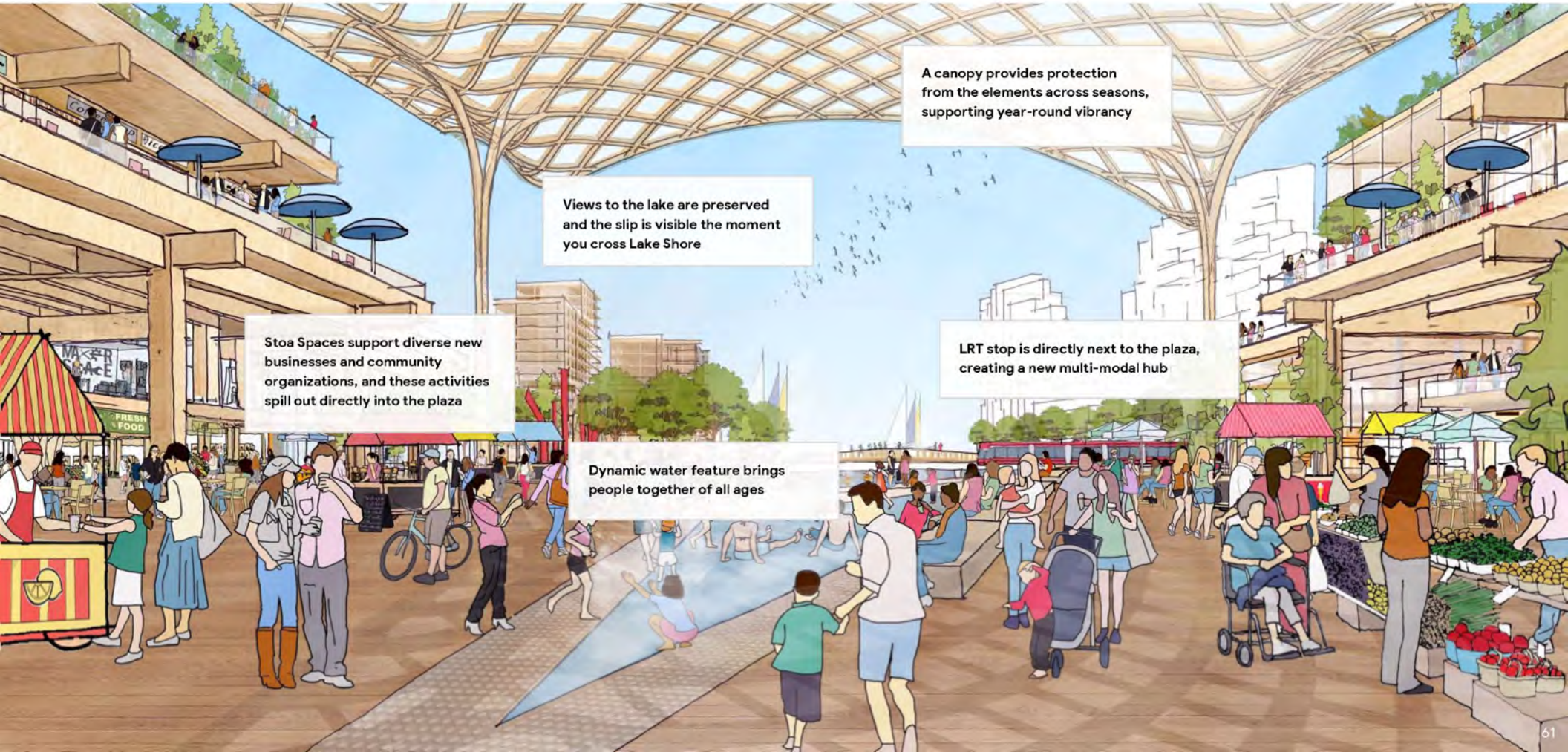
40%

Below-Market Housing at Quayside

More Housing Options

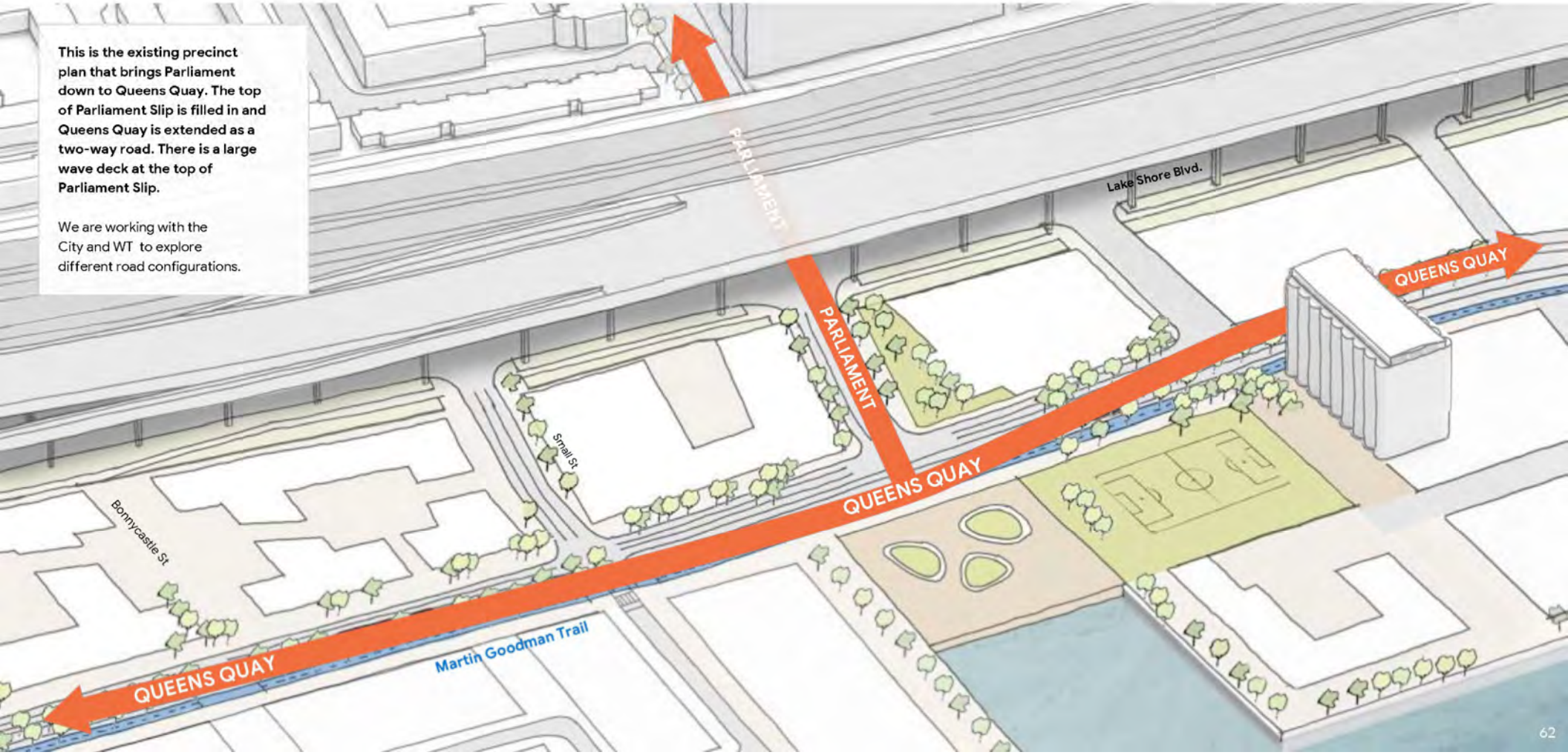


Parliament Plaza

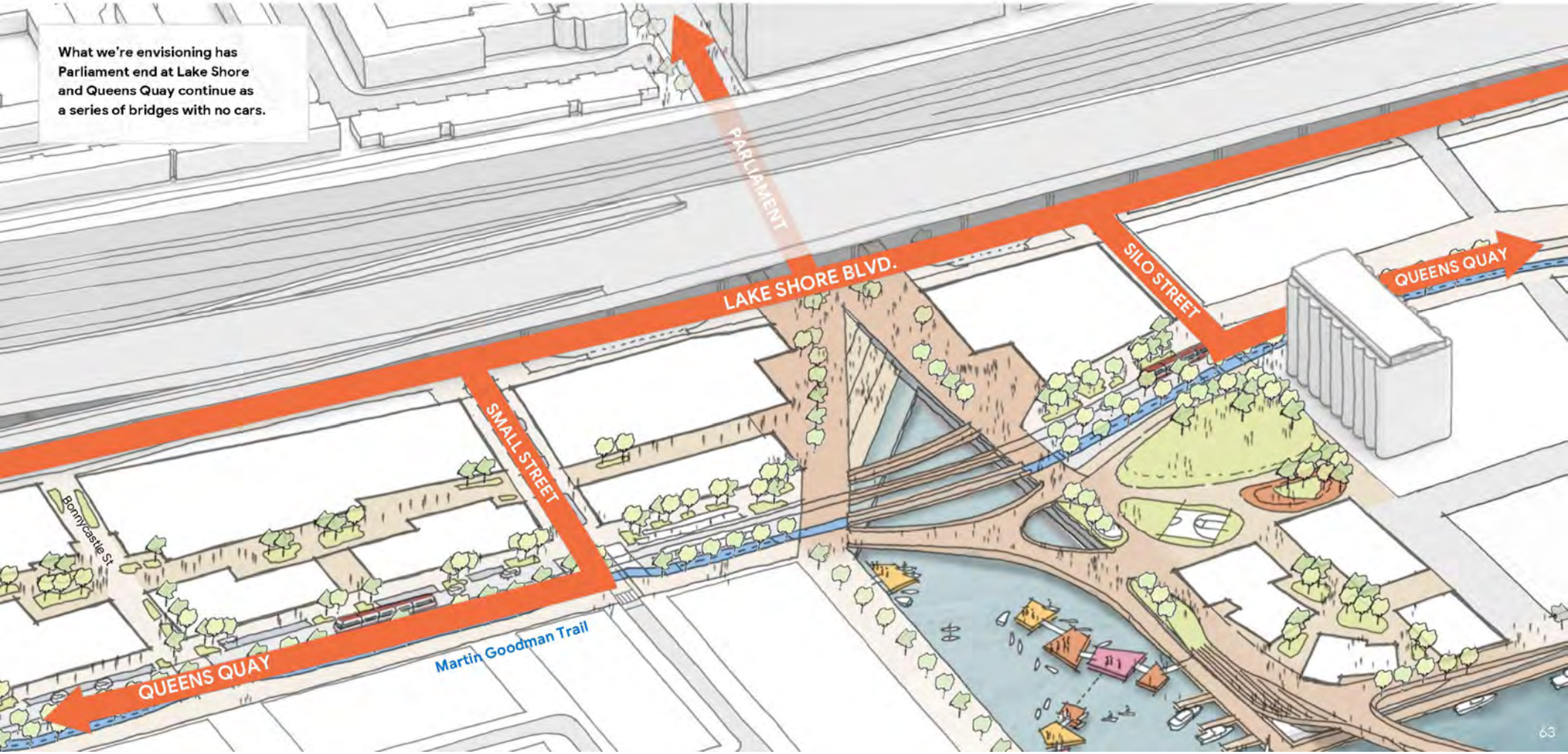


Parliament & Queens Quay: Precinct Plan

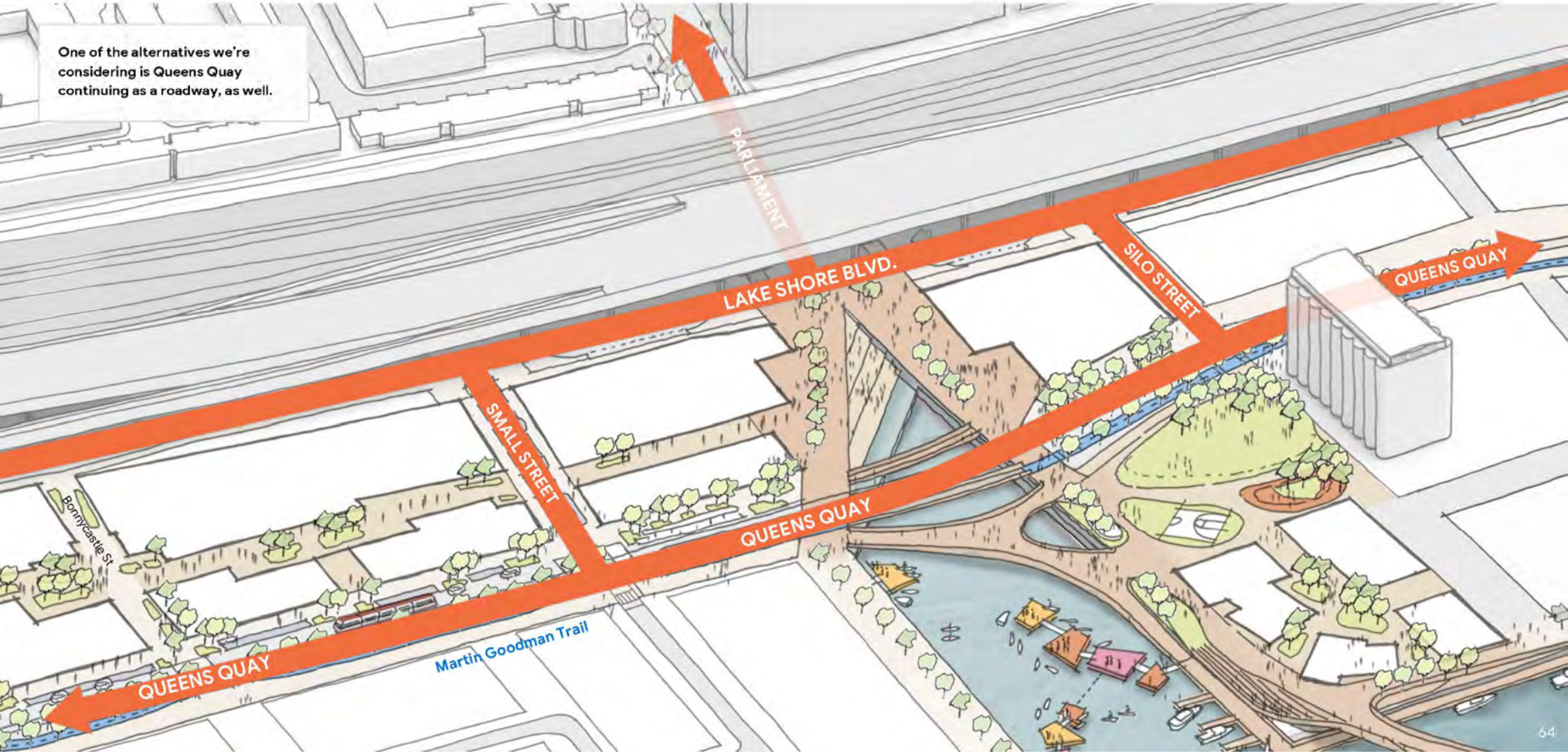
SIDEWALK TORONTO



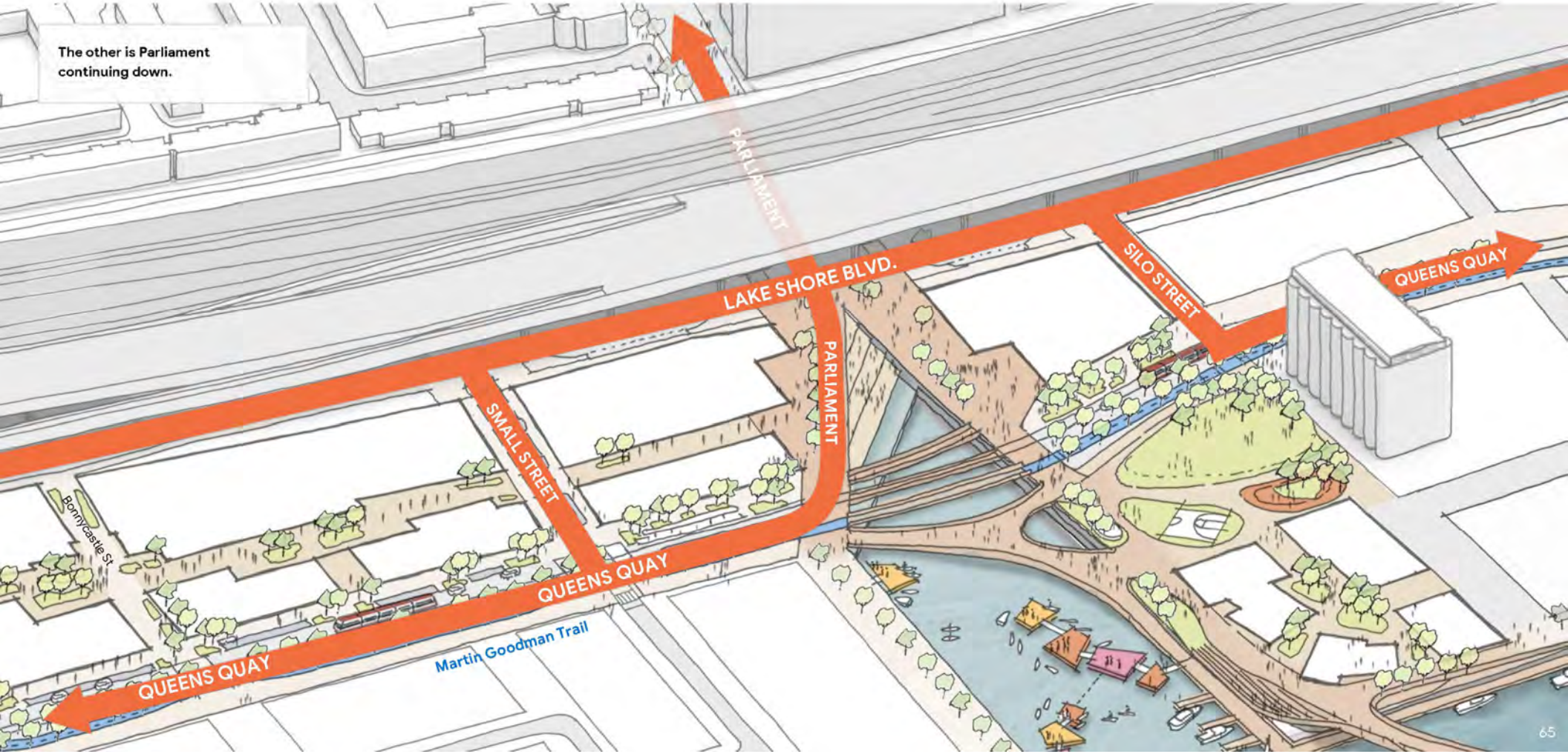
Exploration 1 – Parliament Plaza: No Vehicles in Parliament Plaza



Exploration 2 – Parliament Plaza: East ↔ West Vehicular Connection



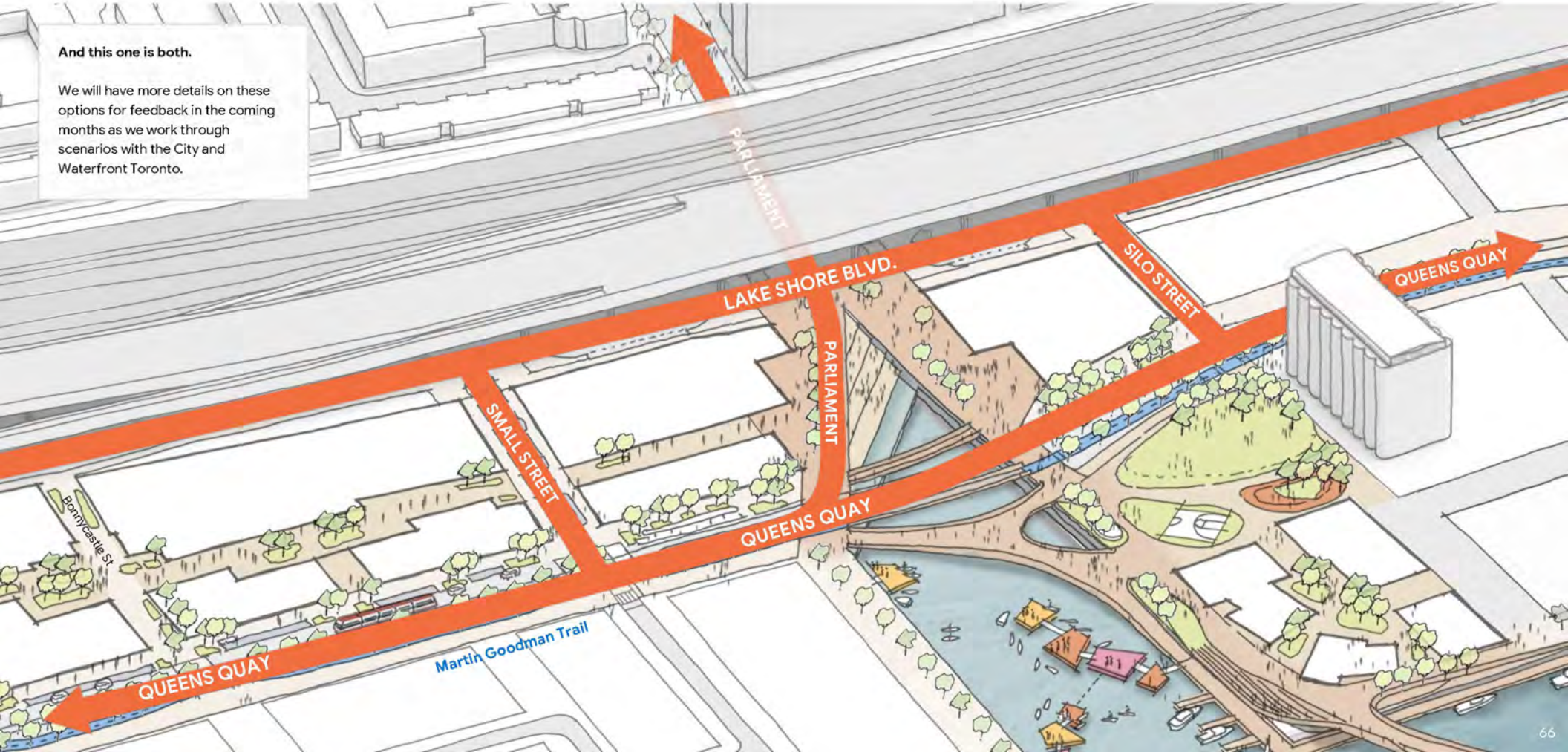
Exploration 3 – Parliament Plaza: North ↕ South Vehicular Connection



Exploration 4 – Parliament Plaza: N ↕ S and E ↔ W Vehicular Connections

And this one is both.

We will have more details on these options for feedback in the coming months as we work through scenarios with the City and Waterfront Toronto.



Queens Quay



The sidewalk on the north side becomes an animated promenade with space gained from a proposal to turn the street into a one-way.

There are significant tree plantings on the street, exceeding the City's ambitious 40% goal for tree canopy.

Raincoats that protect sections from rain, and the ground floors are Stoa spaces that open up into the street.

There are no curbs — but there are clear tactile indicators at crosswalks — to make the street safe for everyone and maximize pedestrian experience.

Pedway between Lake Shore Blvd East & Queens Quay



Parliament Slip



This is now standing on the pedestrian bridge crossing Parliament Slip on the way to Villiers island.

You can see the promenade fully animated as a place to linger and play.

You can see the bridge ramping down to the floating walkway and series of floating islands. The shoreline is naturalized to support biodiversity.

This area is designed for real water activation, with kayakers. sail boats and marine transit.

Draft Quayside Site Plan

Job Creation: 9,000+ Construction Jobs

Over 9,000 direct and indirect jobs will be created in Ontario as a result of the building construction at Quayside.

Job Creation: Canadian Mass Timber

Catalyzing the Canadian timber industry through an entire district built with mass timber, resulting in new jobs in Ontario and a reduction in the cost of construction.

Climate Positive: 75-85% Reduced Emissions

Targeting 75 - 85% reduction in greenhouse gas emissions at Quayside compared to typical development: from 6.3 tons CO_2 per Torontonian, to <1 ton per Quaysider.

Affordable Housing: 40% Below-Market

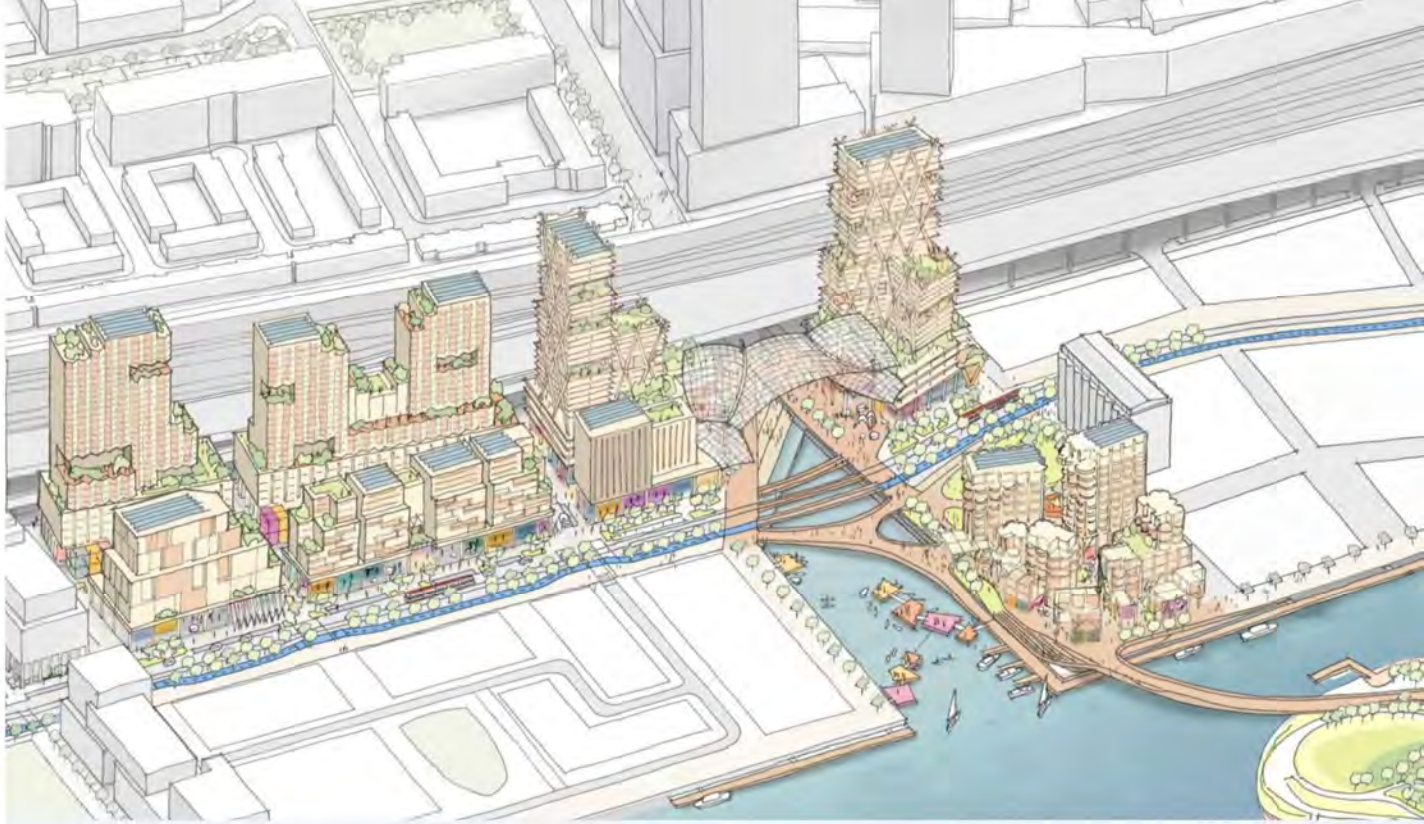
20% affordable housing, including 5% deep affordability, and 20% middle-income housing, including mid-range rental and shared equity.

New Mobility: Streets that Work

New mobility including support for the Light Rail Transit, a Vision Zero neighbourhood, and getting ready for an automated vehicle future.

Data Privacy & Digital Governance

Proposed Civic Data Trust as new 3rd-party public organization to manage all urban data, protect privacy, promote innovation, and safeguard the public interest.



Current Zoning*	Draft Quayside Site Plan	Economic Development
93% Residential	68% Residential (11% Flexible Loft Space)	9,000+ construction jobs created in Ontario
20% Affordable Housing	40% Below Market • 20% Affordable Housing (includes 5% deeply affordable) • 20% Middle-Income Housing (includes 5% shared equity)	3,900 jobs located at Quayside long-term
7% Commercial / Retail	20% Commercial (3% Flexible Loft Space)	• 3,400 office jobs
3,100 Residential Units	12% Flexible Lower Floors (Stoa: Retail, Production, Arts, Community)	• 275 retail jobs
6,200 Residents	2,500 Residential Units	• 150 production jobs
	5,000 Residents (approx.)	• 75 community jobs

*Approx. based on zoning diagrams

SIDEWALK TORONTO

GENERAL SESSION

Q&A

Breakouts

WATERFRONToronto

A 50-minute exploration of the following topics as it relates to the draft Quayside site plan.

1. **Quayside Site Plan & Transportation**
2. **Social Infrastructure / Housing Affordability**
3. **Digital Governance**
4. **Sustainability**

Public

SIDEWALK TORONTO

Quayside Site Plan

NOVEMBER 29, 2018

WATERFRONTtoronto

SIDEWALK LABS

Sidewalk Labs – Who We Are

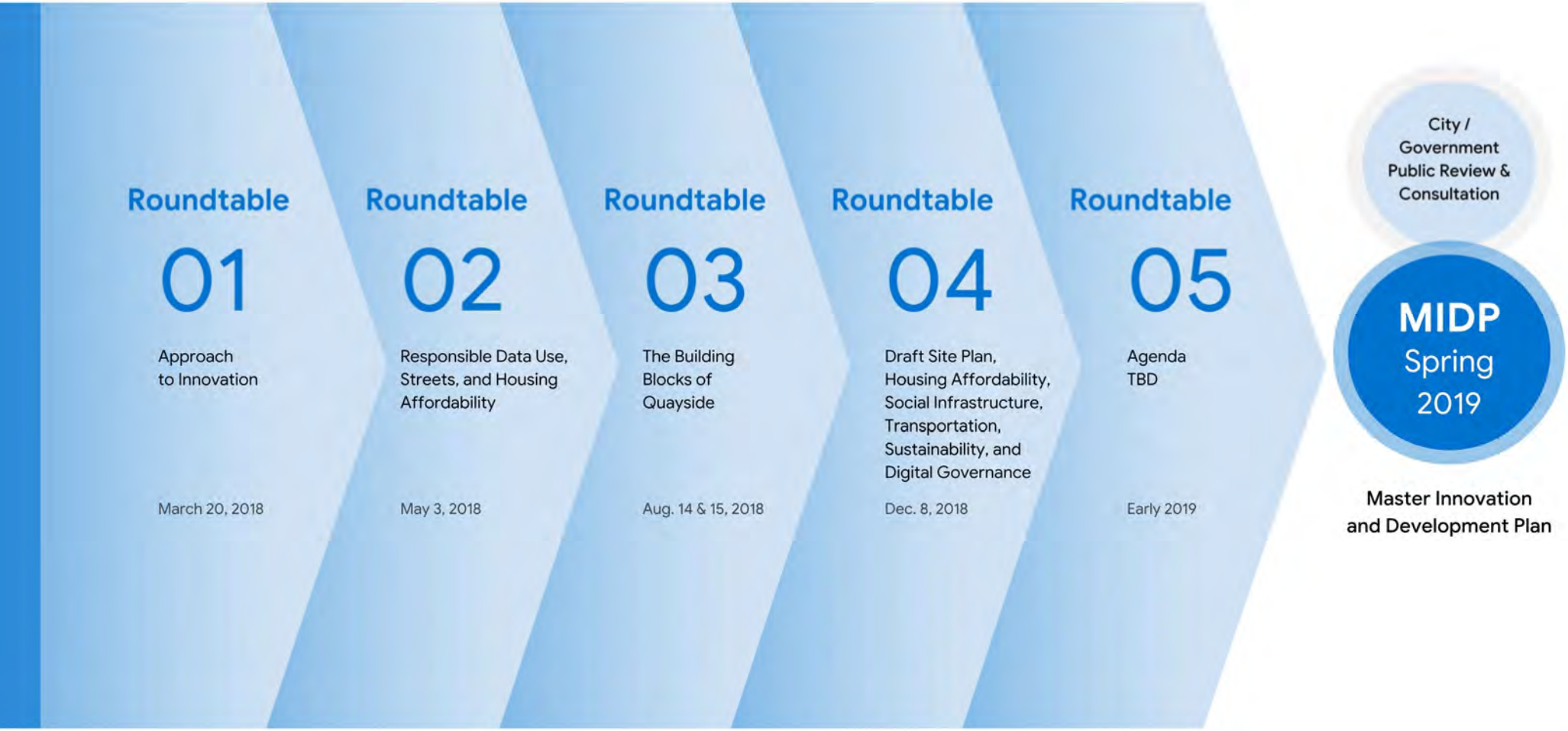
Sidewalk Labs

We aim to combine world-class urban design with cutting-edge technology to set new standards for sustainability, affordability, and economic opportunity for Torontonians of all incomes, abilities, and ages.

Sidewalk Toronto

will create a new type of inclusive urban community that puts physical, digital, and social innovation to work for a better quality of life.

November 2018 – Where We Are in the Public Engagement Process



Waterfront Toronto's Evaluation Framework for the MIDP

WATERFRONTToronto

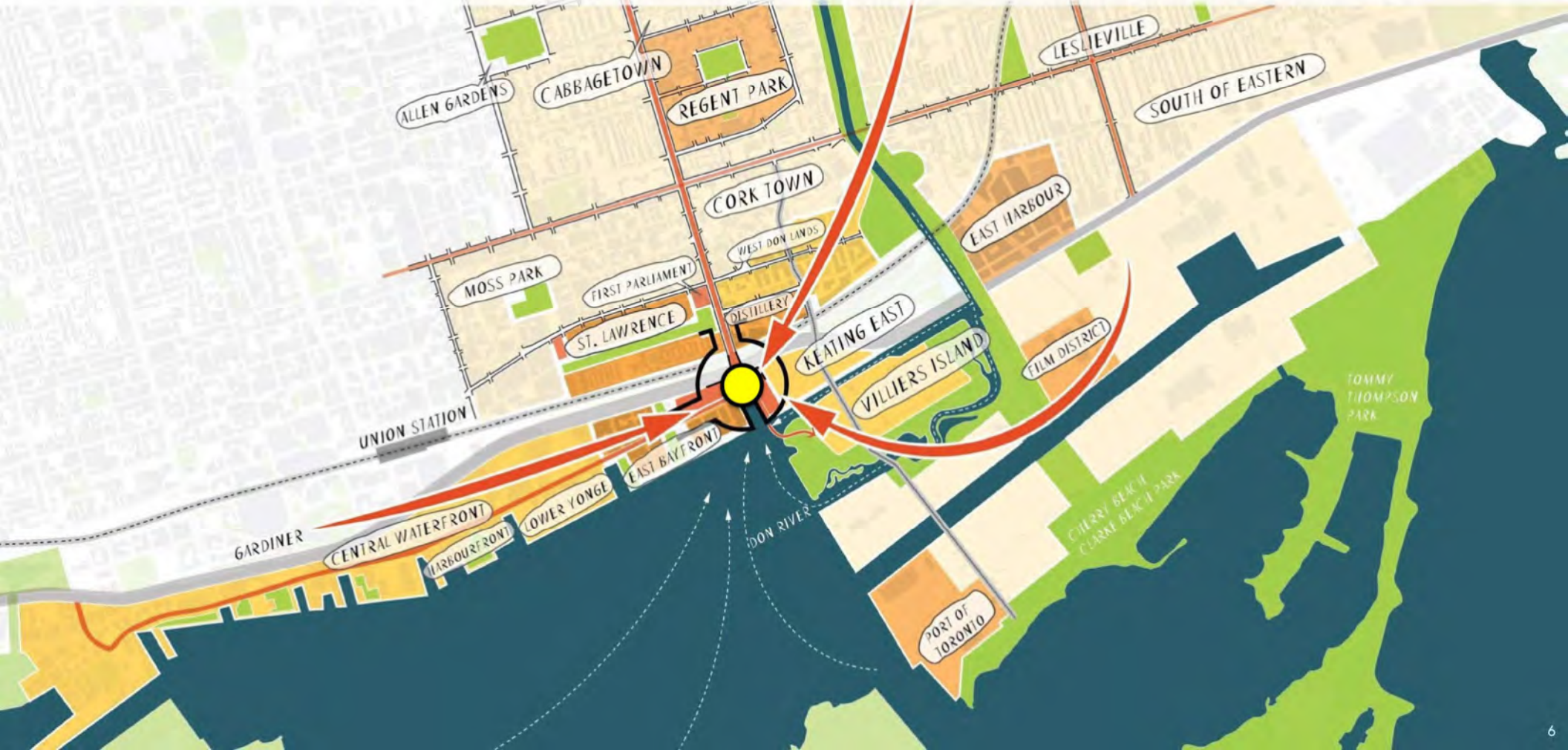
WATERFRONT TORONTO KEY OBJECTIVES

Priority Outcomes and "Must Do's" for the MIDP

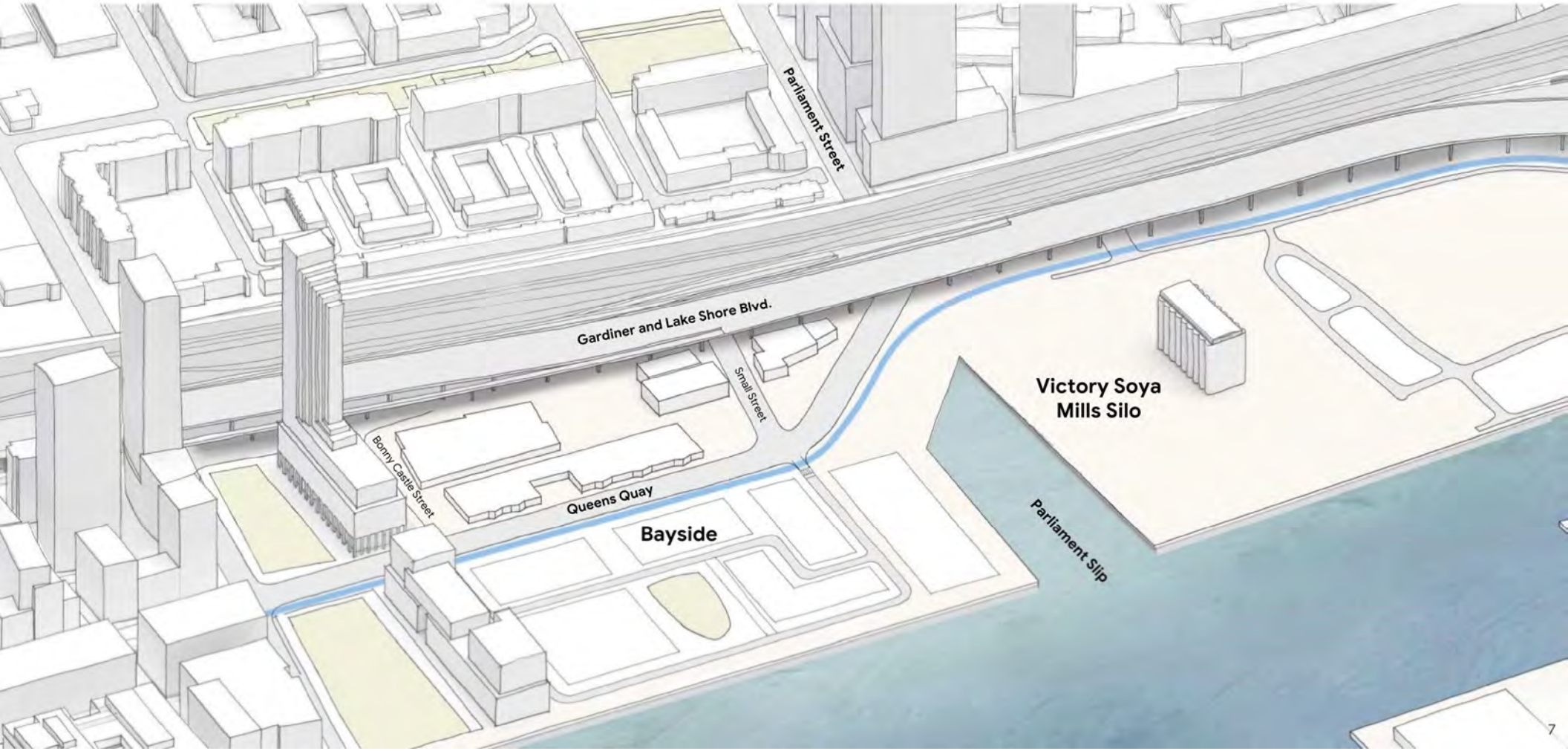
- Job Creation
- Climate Positive
- Affordable Housing
- New Mobility
- Data Privacy & Digital Governance


SIDEWALK TORONTO
Quayside
A New Neighbourhood
5

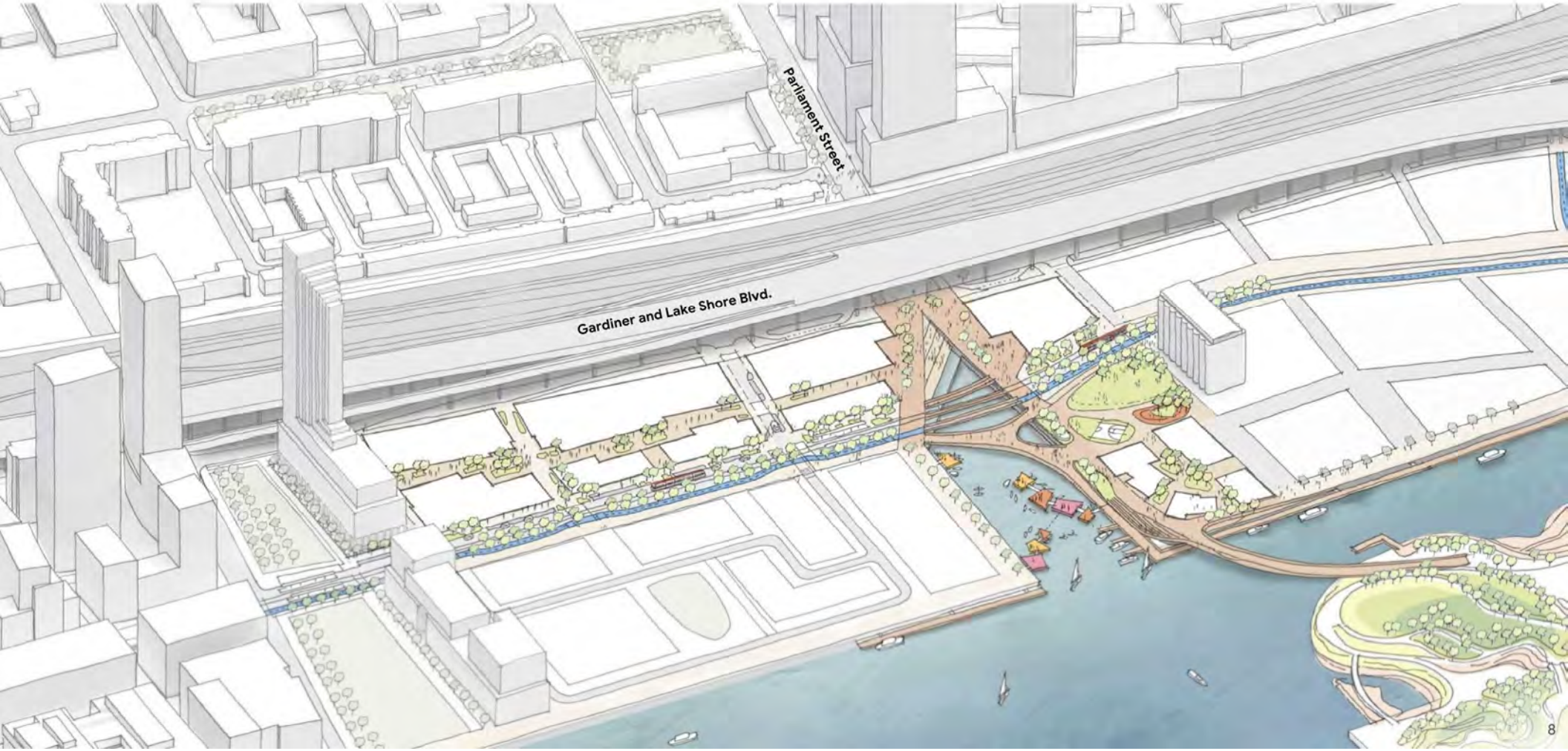
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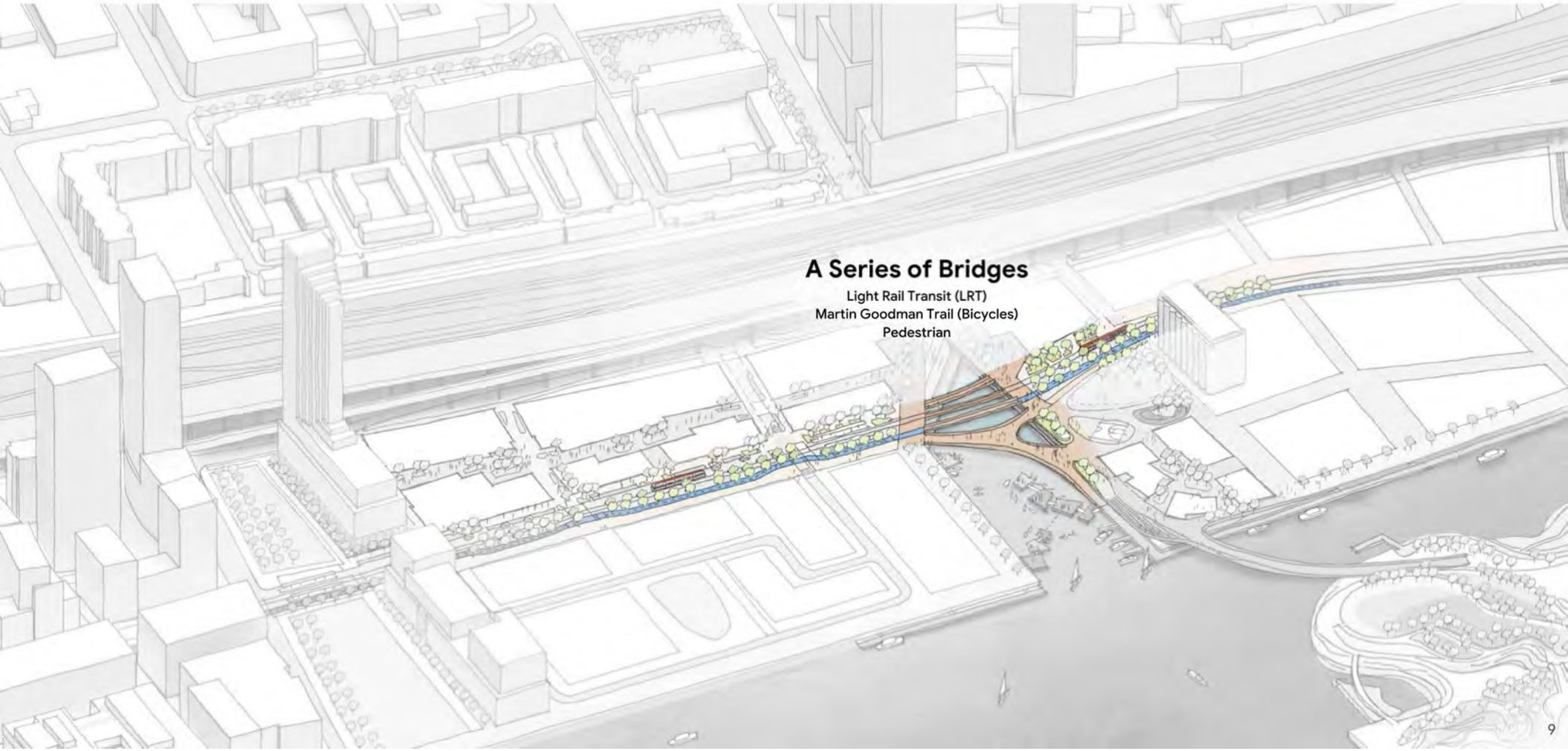
Quayside – Today



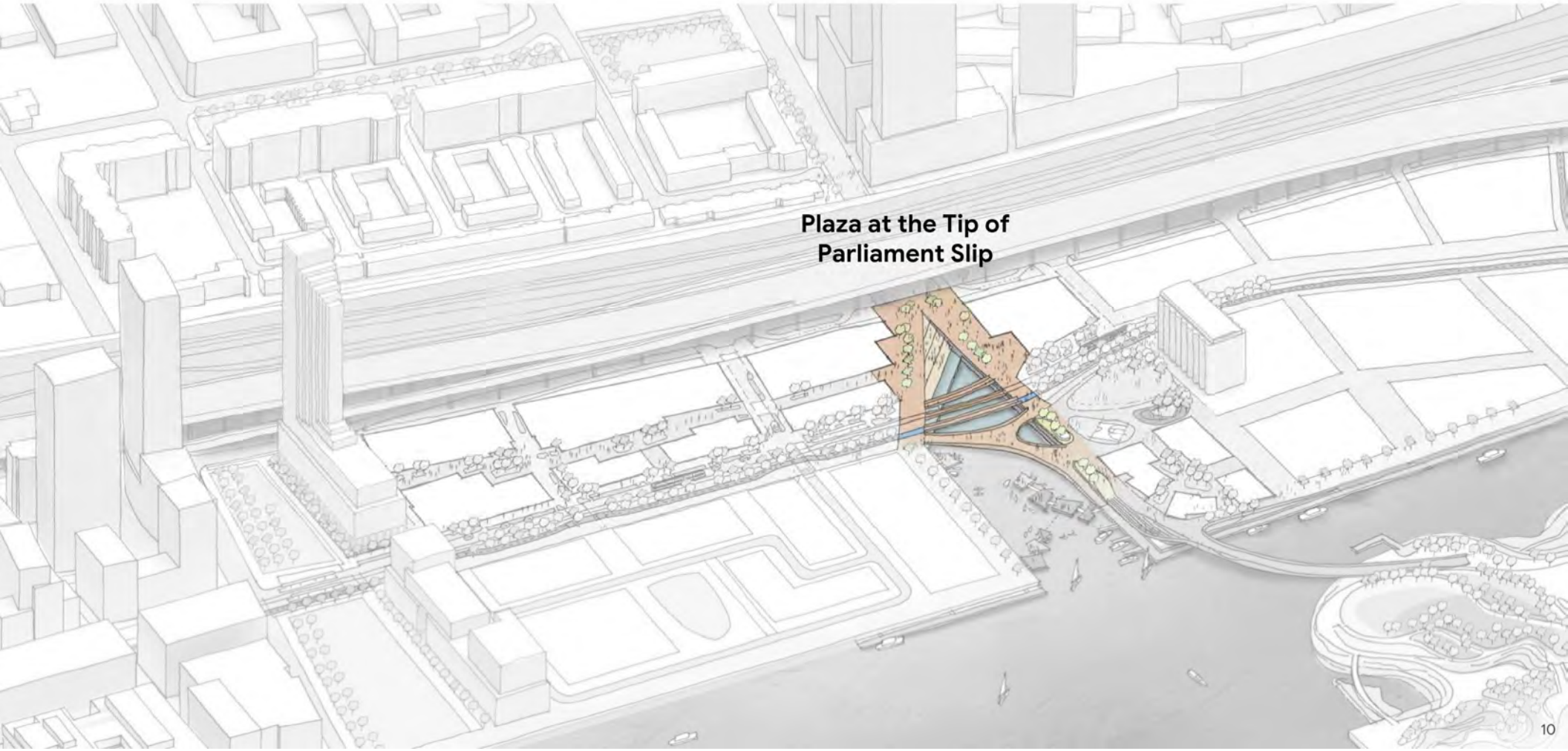
Quayside – People-first Streets and Public Realm



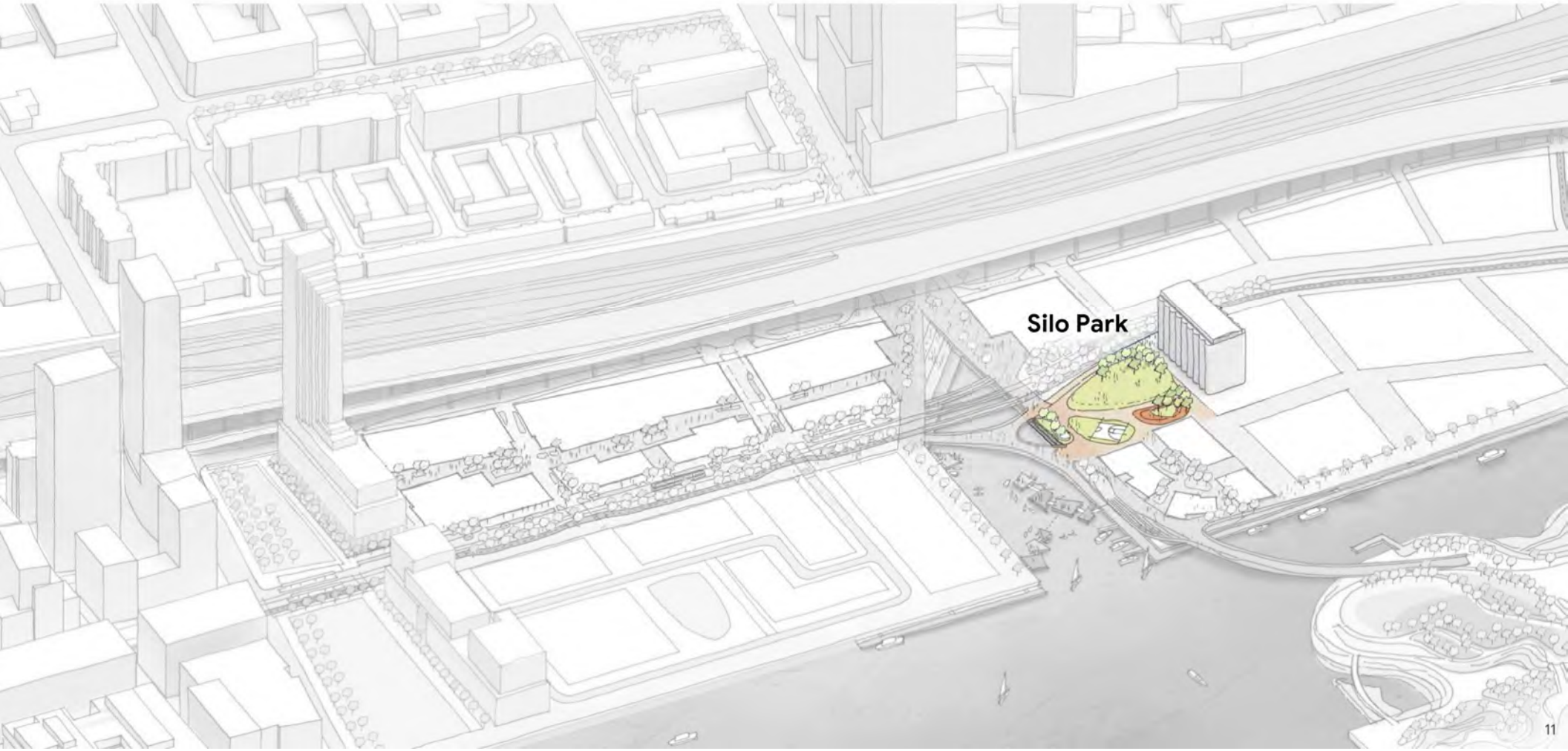
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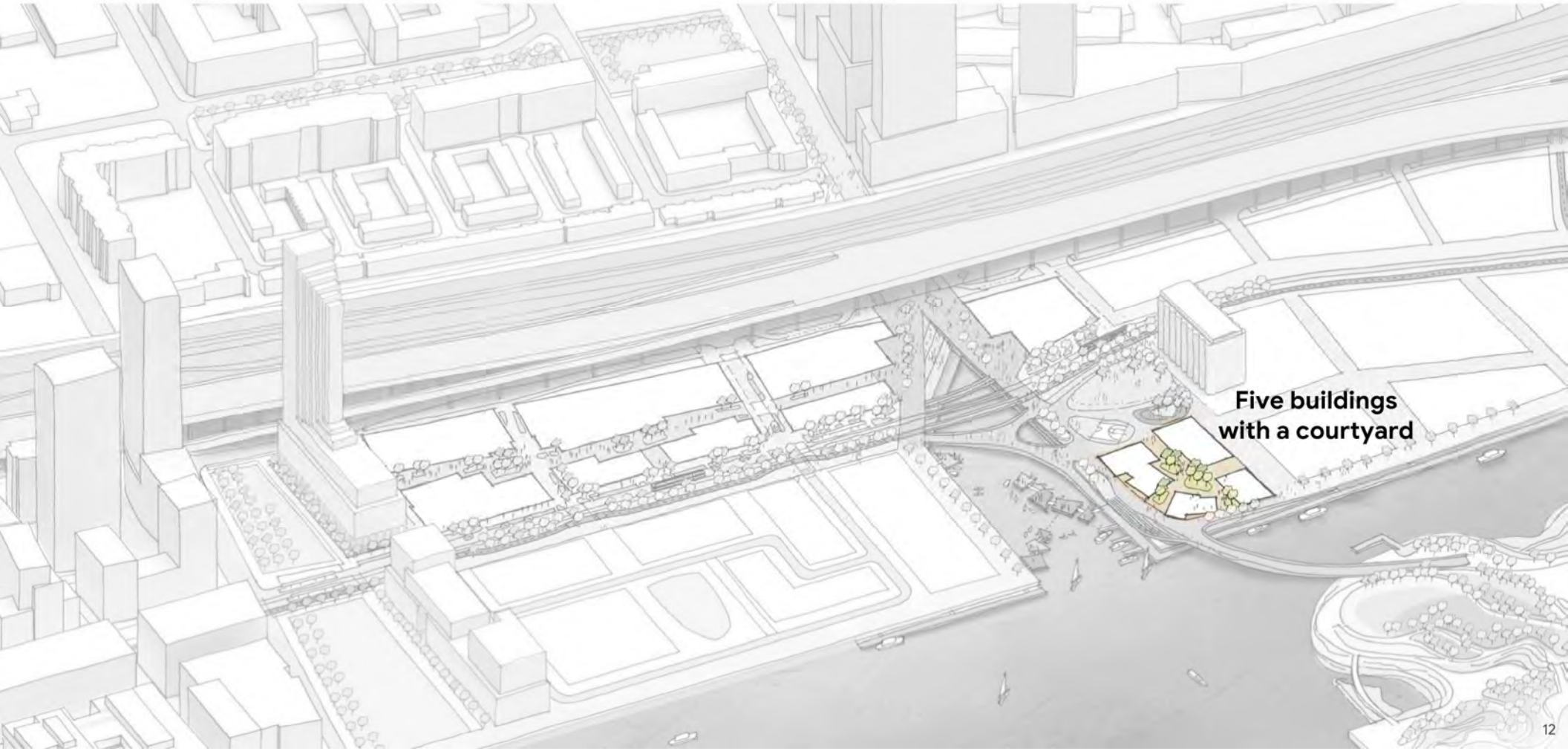
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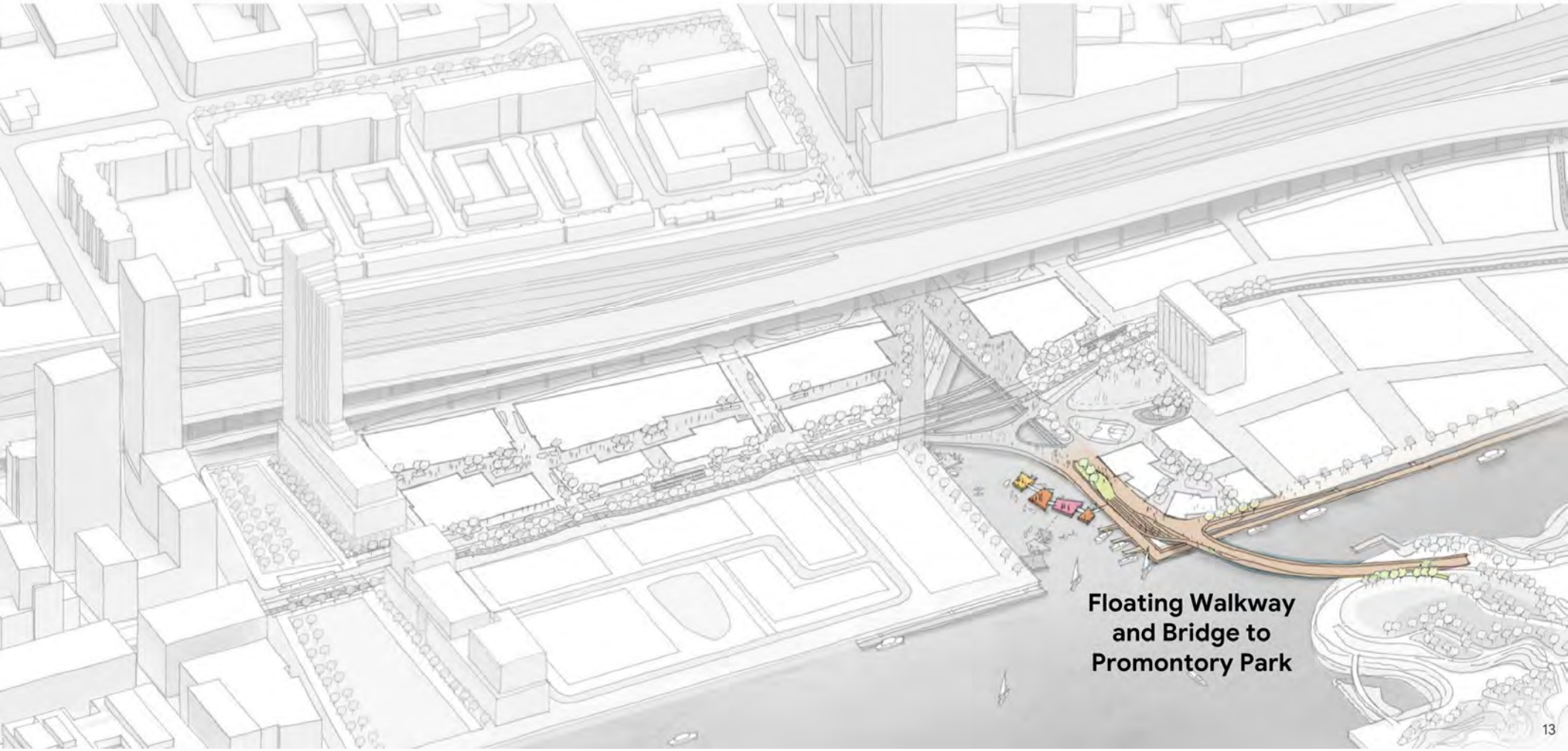
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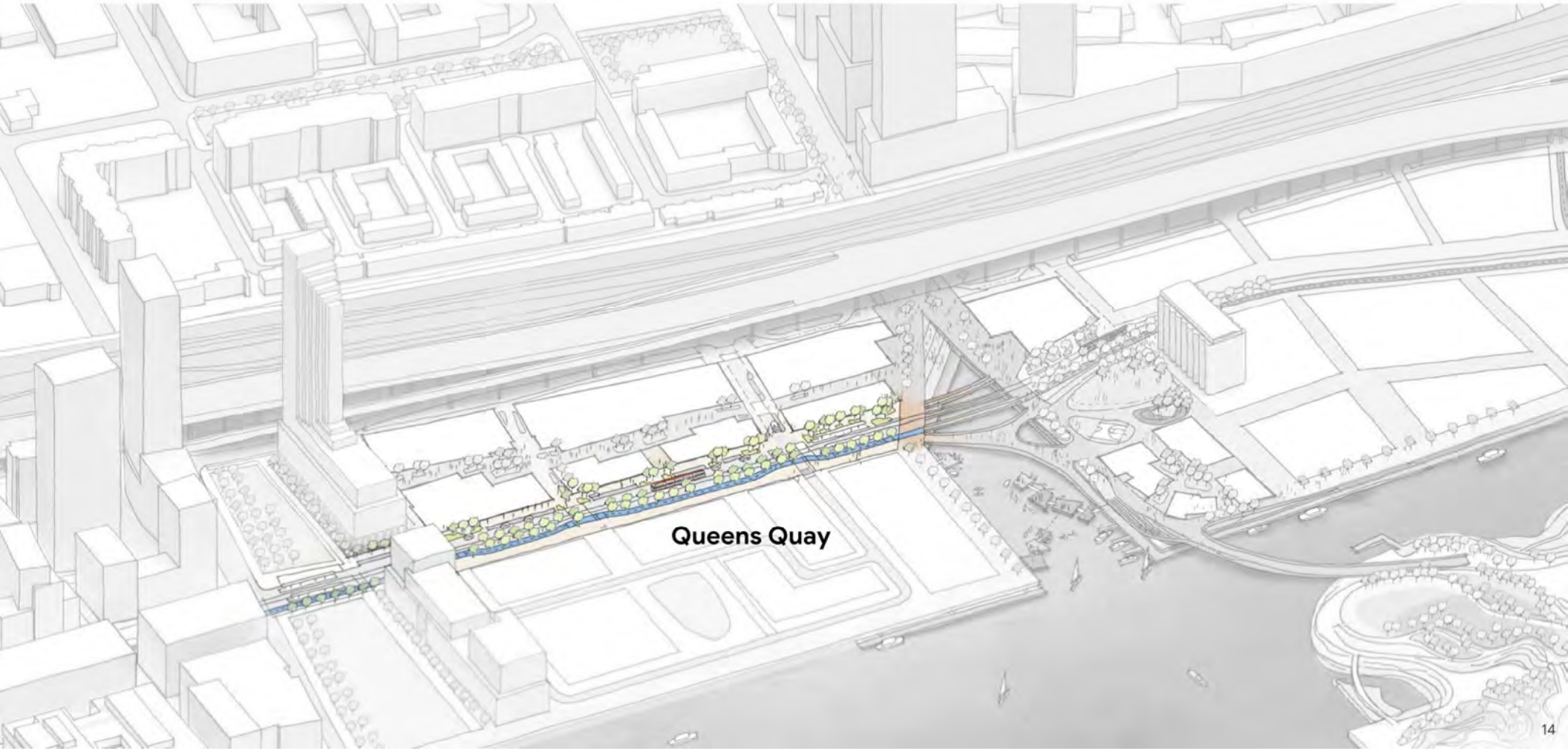
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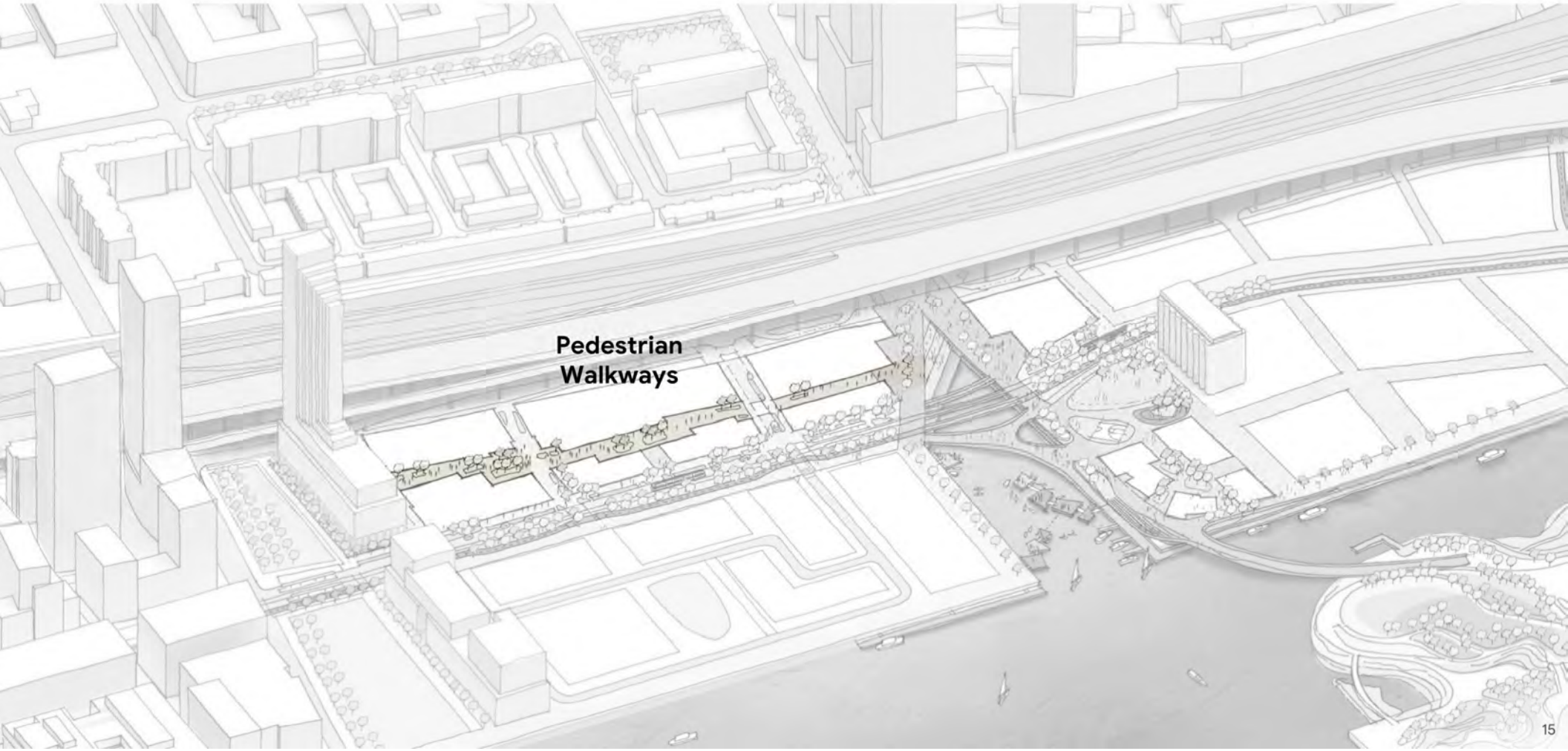
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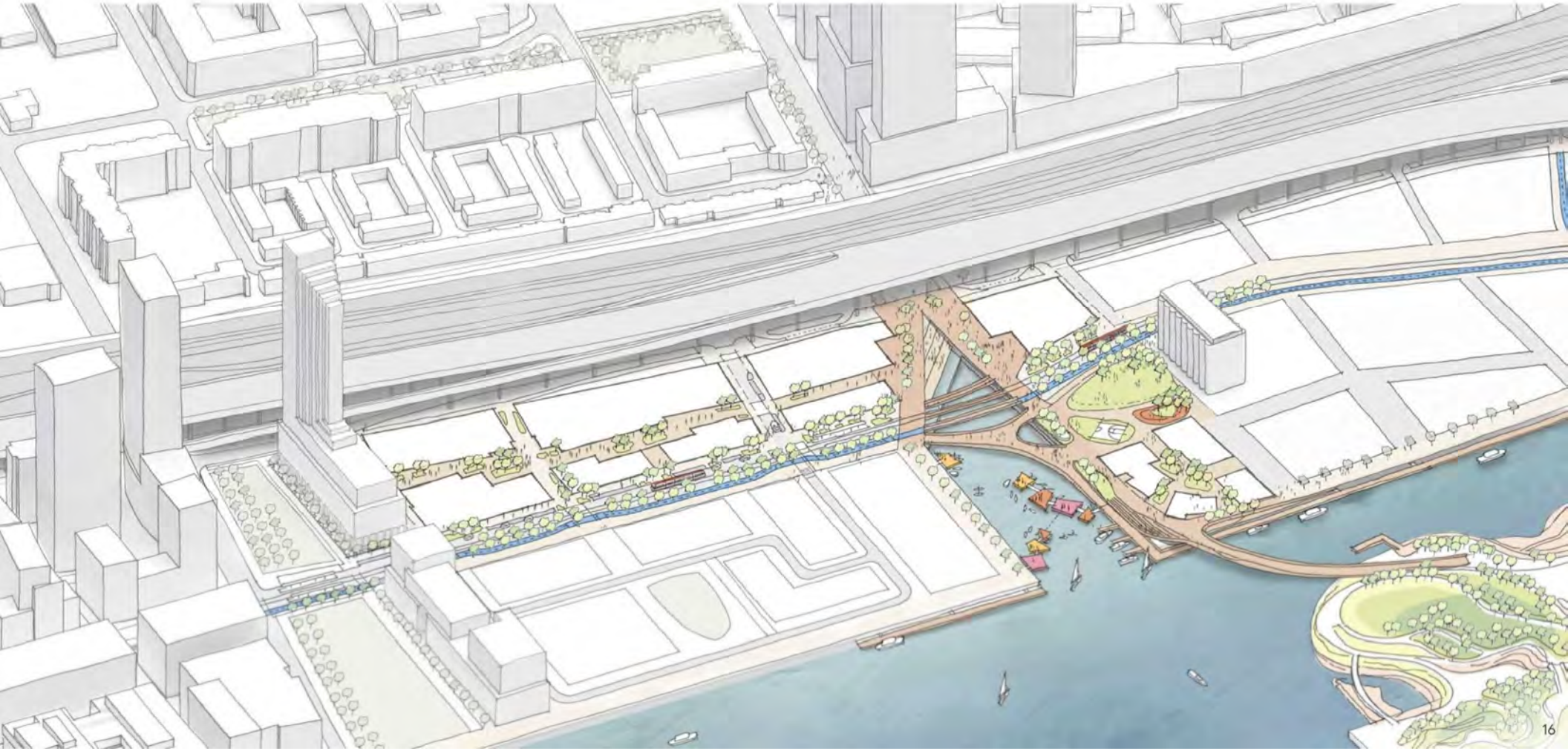
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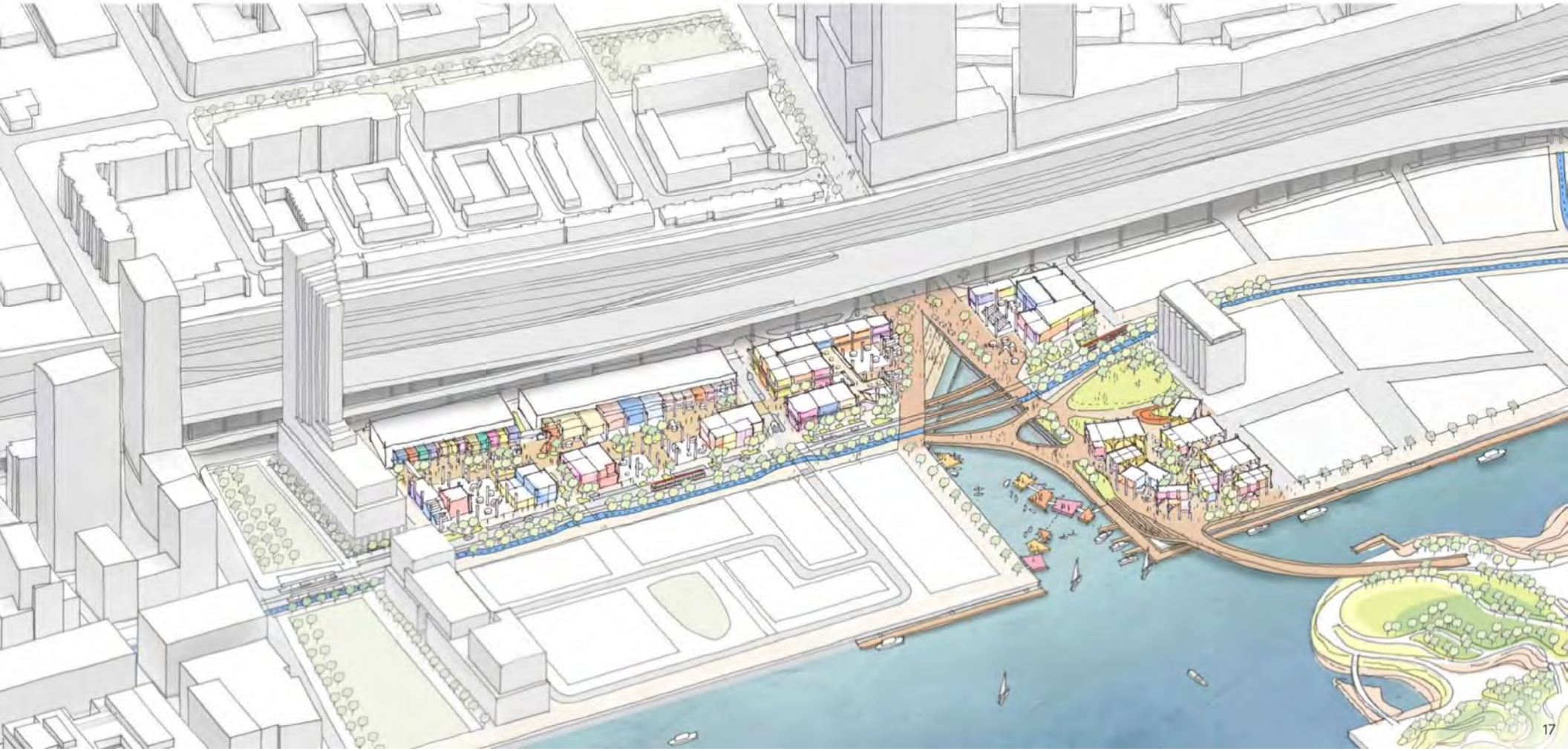
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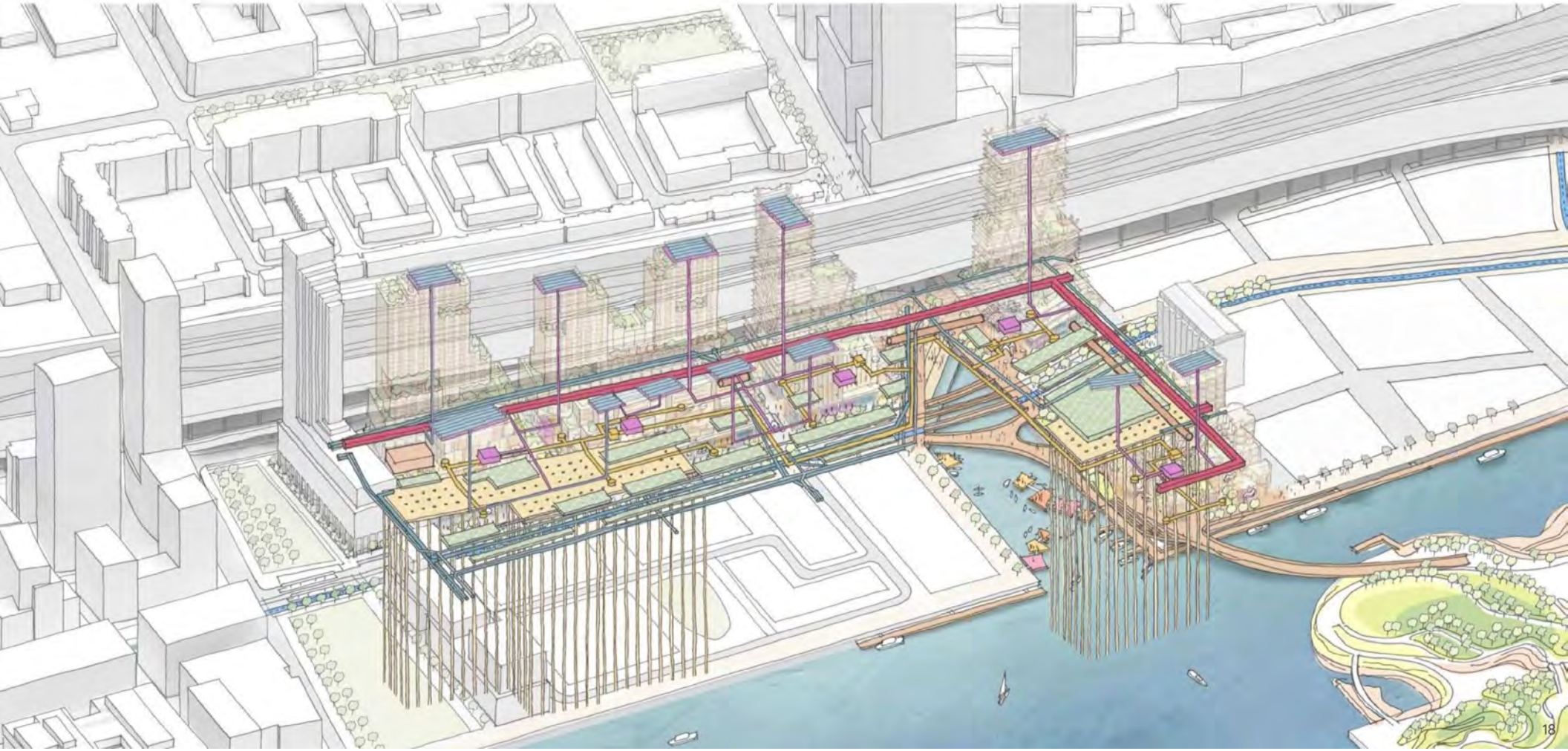
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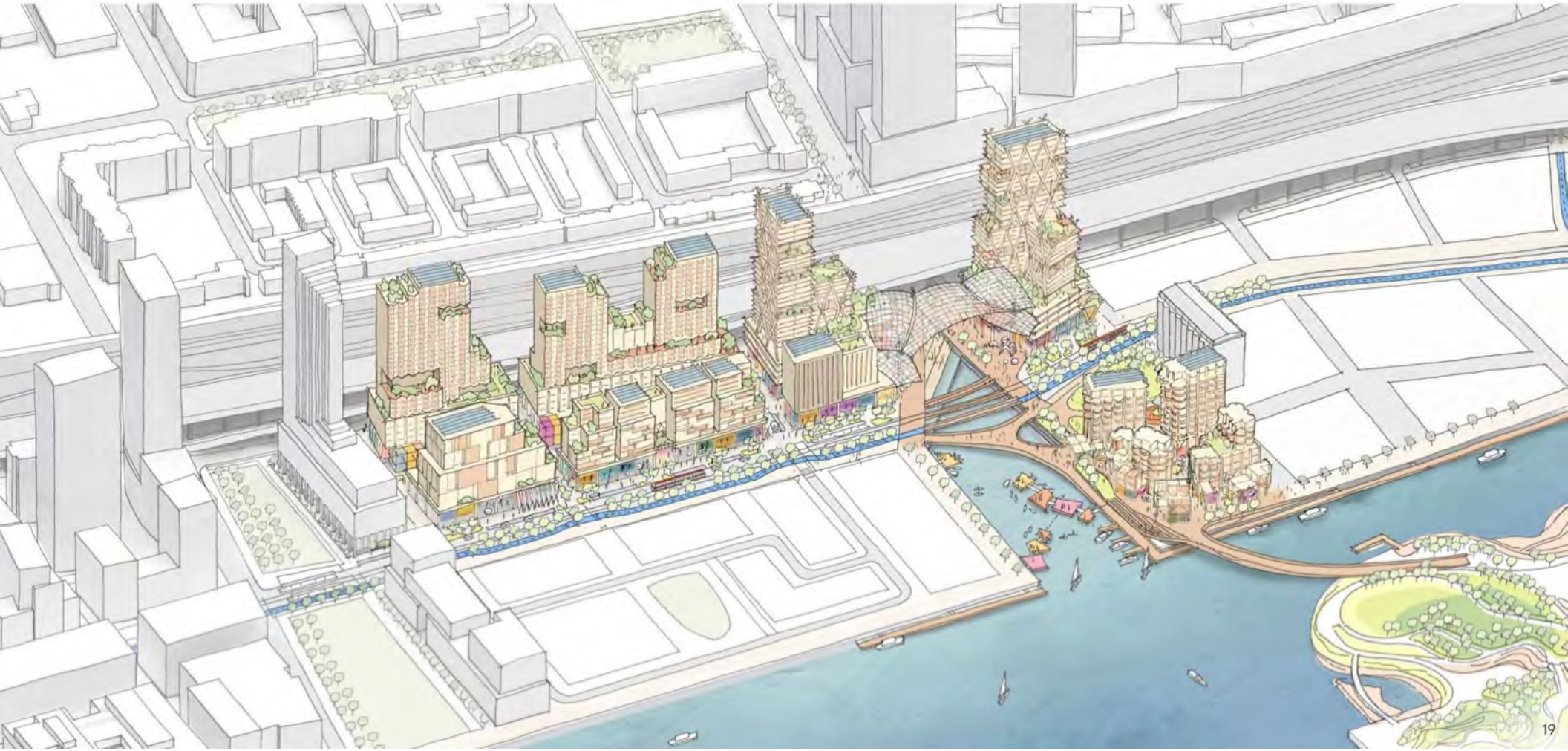
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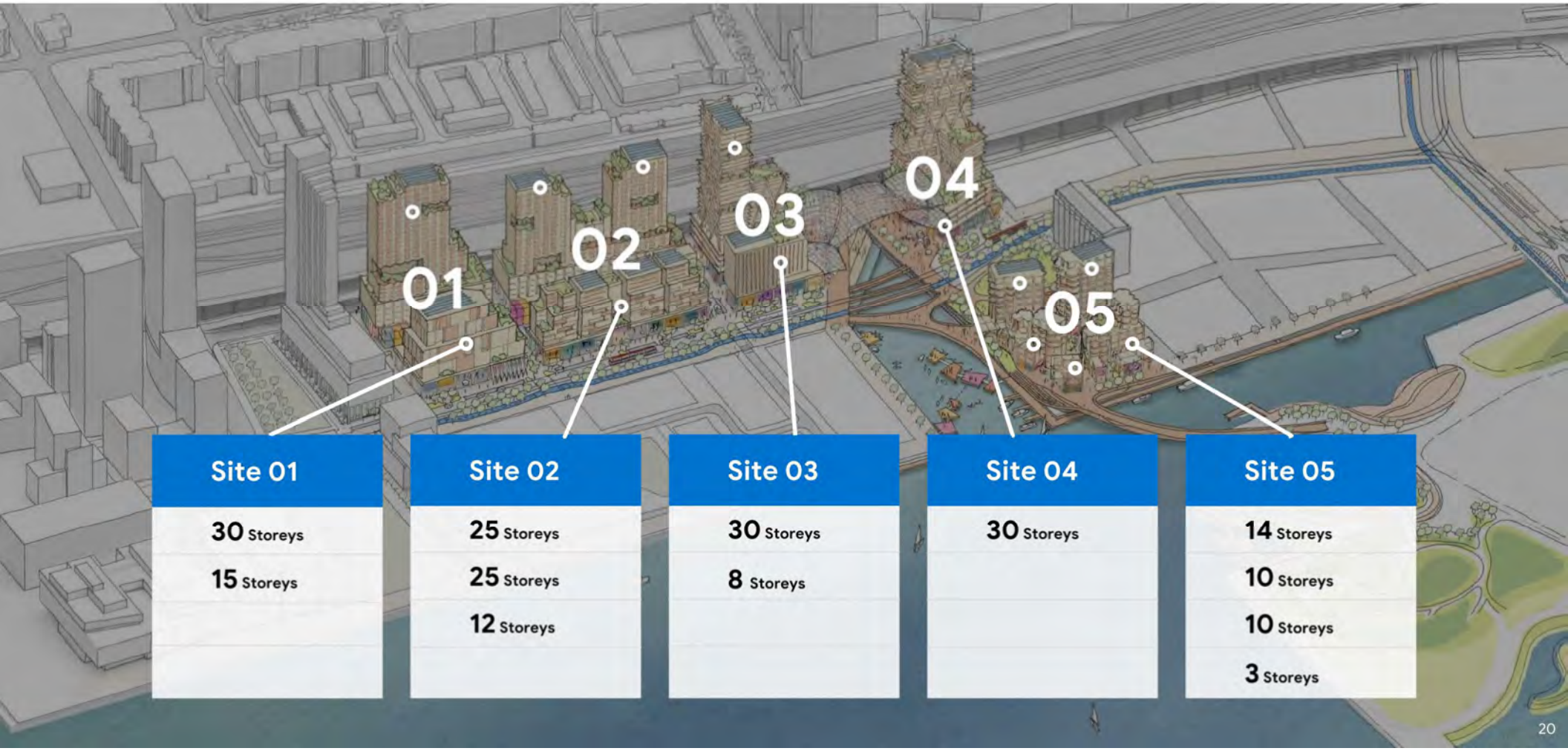
Quayside – Providing Sustainable Infrastructure



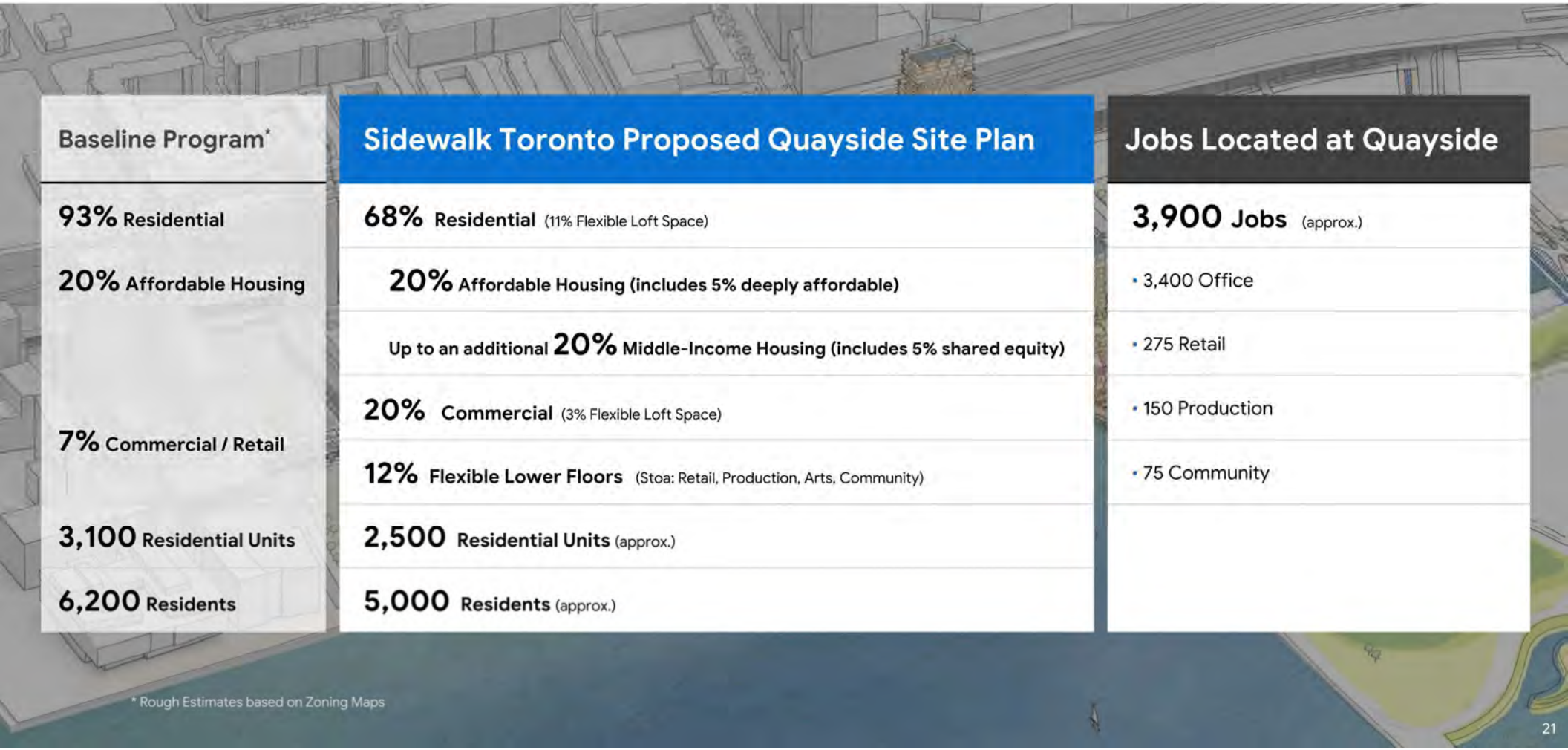
Quayside – Building Mass Timber



Quayside Draft Plan – Proposed Program Density up to 3.3M SF



Quayside Program – Proposed Program Density up to 3.3M SF



Baseline Program*	Sidewalk Toronto Proposed Quayside Site Plan	Jobs Located at Quayside
93% Residential	**68%** Residential (11% Flexible Loft Space)	**3,900** Jobs (approx.)
20% Affordable Housing	**20%** Affordable Housing (includes 5% deeply affordable)	• 3,400 Office
	Up to an additional **20%** Middle-Income Housing (includes 5% shared equity)	• 275 Retail
7% Commercial / Retail	**20%** Commercial (3% Flexible Loft Space)	• 150 Production
	12% Flexible Lower Floors (Stoa: Retail, Production, Arts, Community)	• 75 Community
3,100 Residential Units	**2,500** Residential Units (approx.)	
6,200 Residents	**5,000** Residents (approx.)	

* Rough Estimates based on Zoning Maps

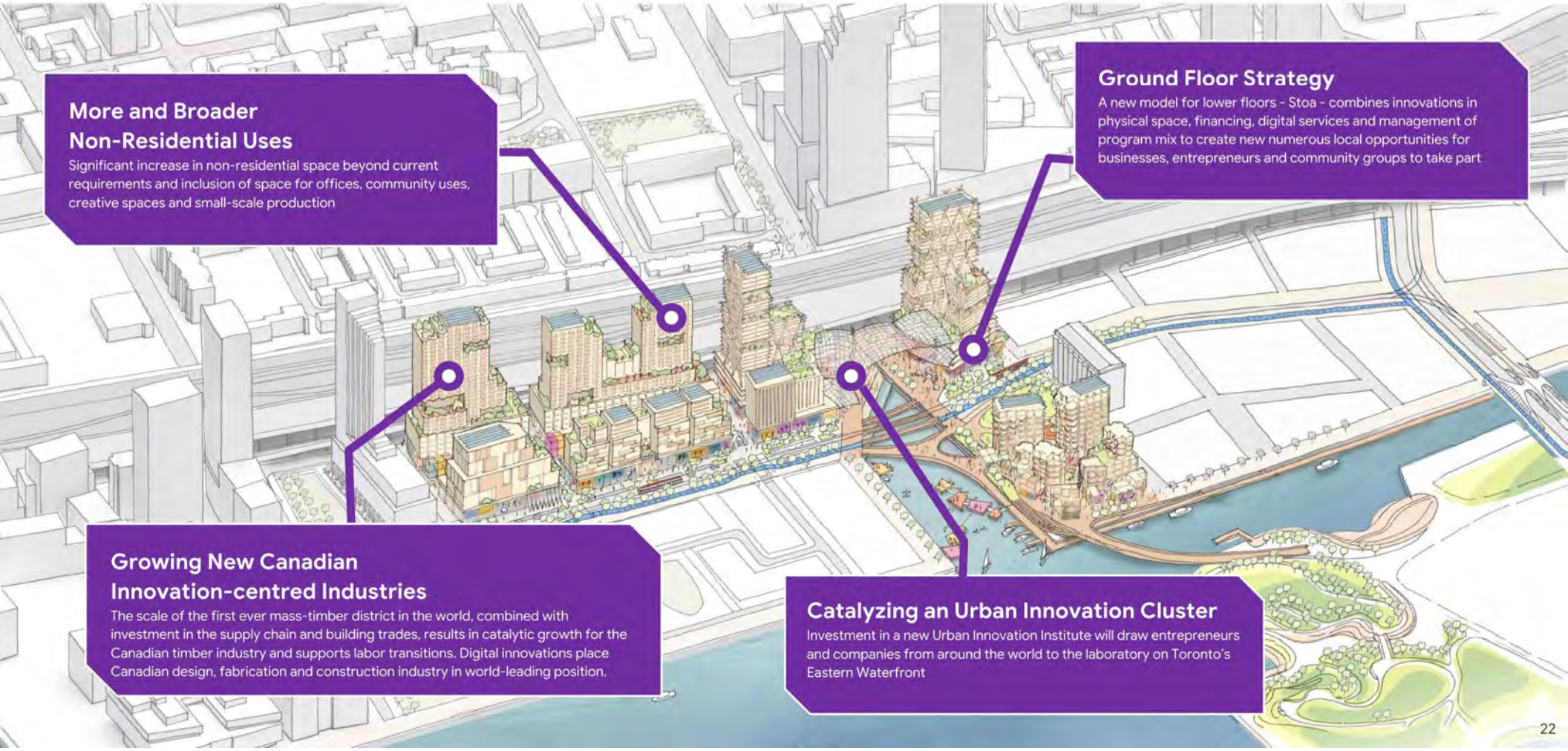
21

Quayside – 3,900 Jobs

Quayside will be the beginning of a new approach to urban development on Toronto's Waterfront that sets a new standard for urban development in the 21st century.

Job Creation | Climate Positive | Affordability & Inclusivity | New Mobility

SIDEWALK TORONTO



More and Broader Non-Residential Uses

Significant increase in non-residential space beyond current requirements and inclusion of space for offices, community uses, creative spaces and small-scale production

Ground Floor Strategy

A new model for lower floors - Stoa - combines innovations in physical space, financing, digital services and management of program mix to create new numerous local opportunities for businesses, entrepreneurs and community groups to take part

Growing New Canadian Innovation-centred Industries

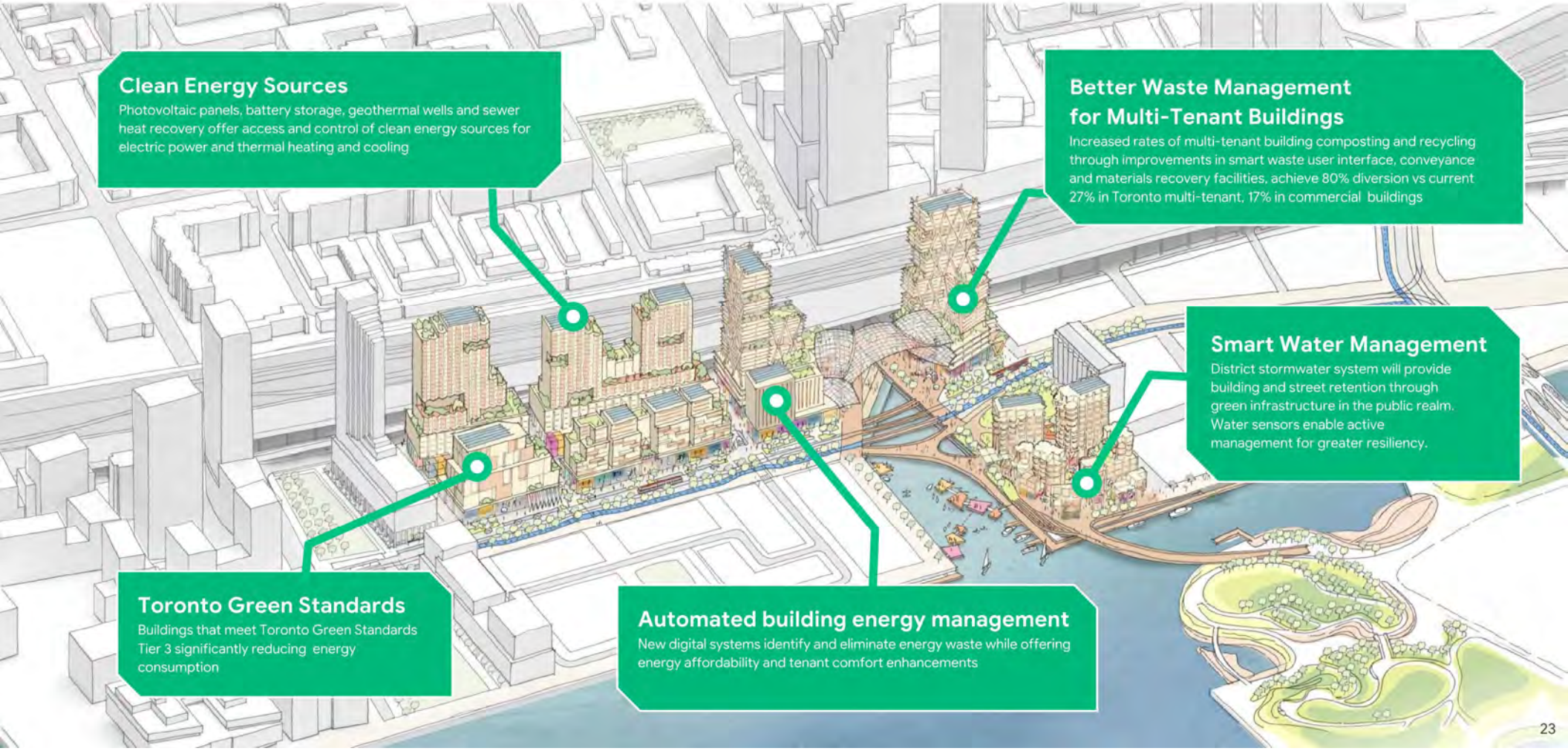
The scale of the first ever mass-timber district in the world, combined with investment in the supply chain and building trades, results in catalytic growth for the Canadian timber industry and supports labor transitions. Digital innovations place Canadian design, fabrication and construction industry in world-leading position.

Catalyzing an Urban Innovation Cluster

Investment in a new Urban Innovation Institute will draw entrepreneurs and companies from around the world to the laboratory on Toronto's Eastern Waterfront

Quayside – 75%-85% Reduction in GHG

In its initial real estate development, Sidewalk Labs will invest in a series of innovations that drastically reduce the level greenhouse gas (GHG) emissions, enable smarter management of resources, and reduce the cost of future upgrade and maintenance to the system.

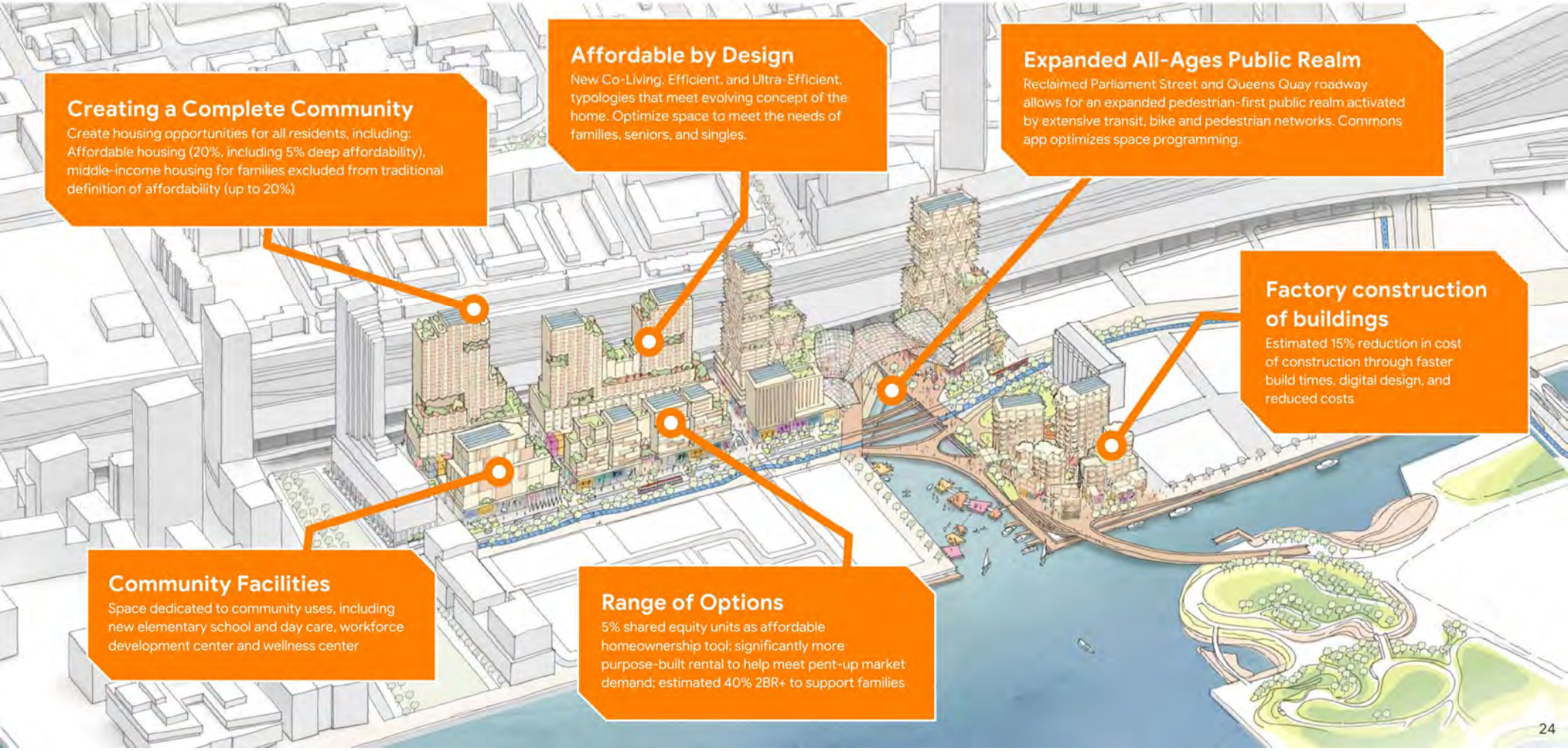


Quayside – Up to 40% Below-Market Housing

Housing affordability continues to worsen and is threatening Toronto's tradition of creating inclusive communities.

Job Creation | Climate Positive | **Affordability & Inclusivity** | New Mobility

SIDEWALK TORONTO

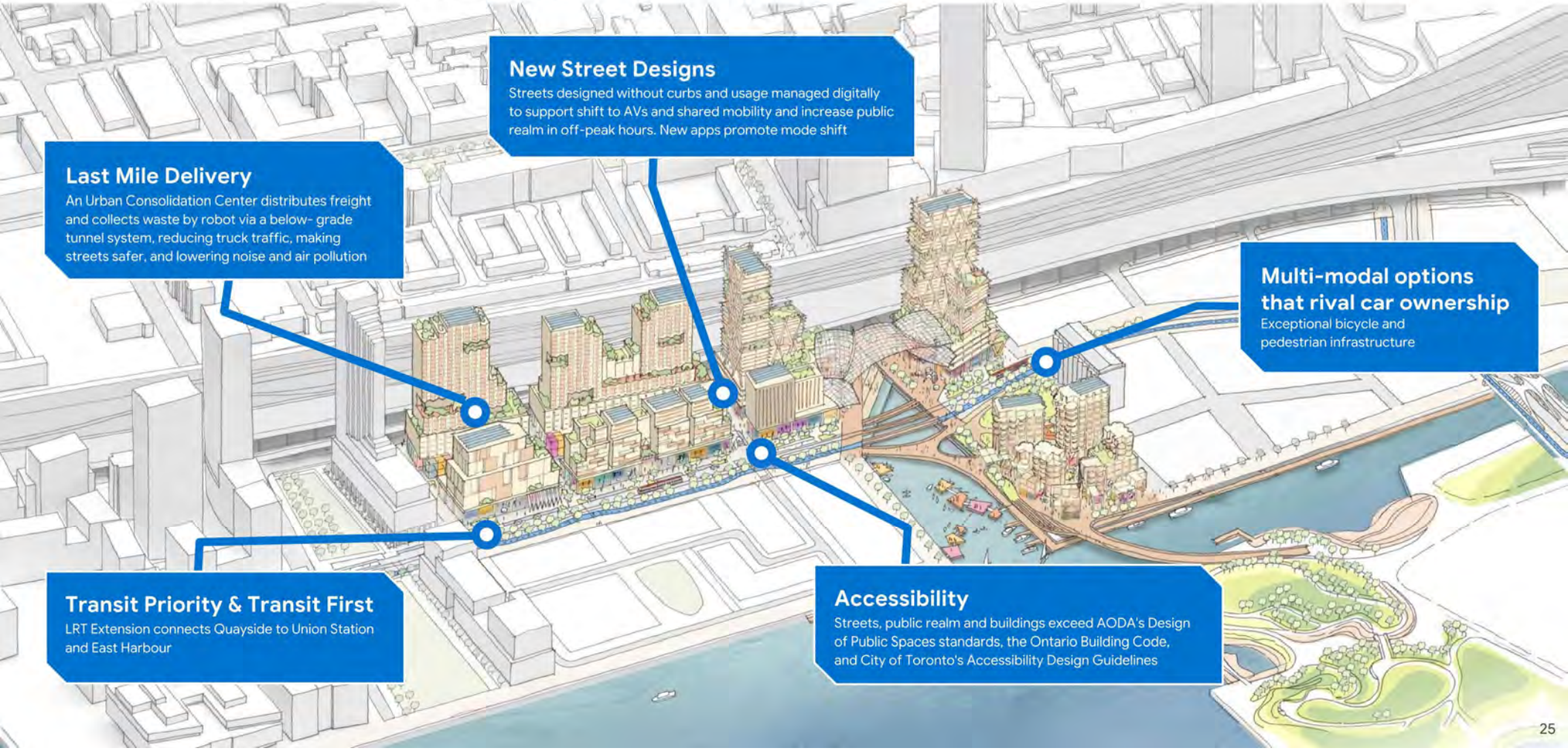


Quayside – Reducing Congestion and Improving Safety

Growth is creating challenges to traditional ways of moving around, but support for transit and innovations in mobility management offer opportunities to help people and goods move easily.

Job Creation | Climate Positive | Affordability & Inclusivity | **New Mobility**

SIDEWALK TORONTO



Quayside Site Plan

3,900+ Jobs

Office, retail, production and community services-related employment located at Quayside.

Canadian Mass Timber

Catalyzing the Canadian timber industry through an entire district built with mass timber, resulting in new jobs in Ontario and 15% reduction in cost of construction, yet conserving the same livable space.

Up to 40% Below-Market Housing

20% affordable housing, including 5% deep affordability, and up to 20% middle-income housing including mid-range rental and shared equity.

Towards Climate Positive

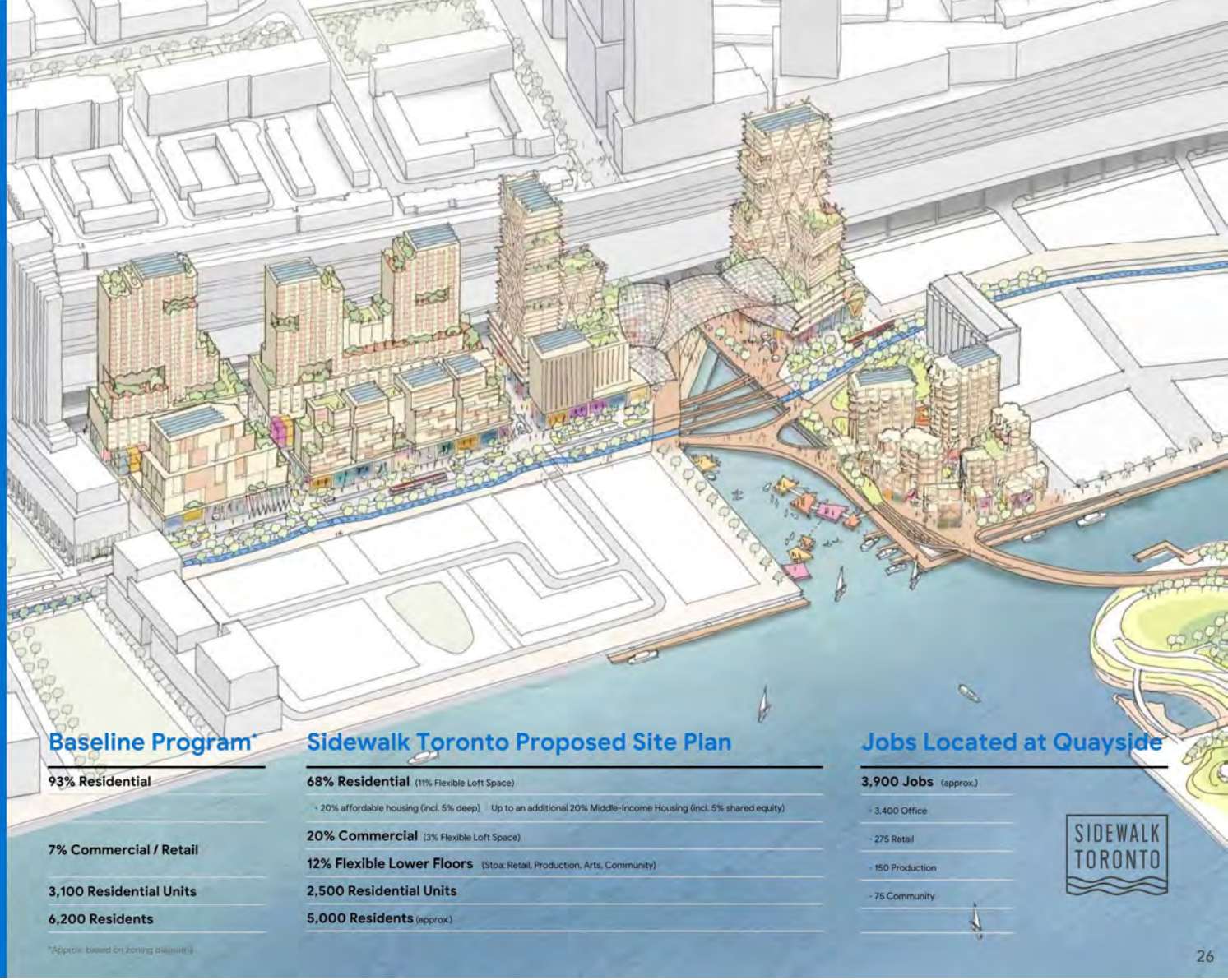
Targeting 75 - 85% reduction in greenhouse gas emissions at Quayside compared to standard development: from 6.3 tons CO_2 per Torontonian, to <1 ton per Quaysider.

Streets that Work

New mobility including support for the Light Rail Transit, a Vision Zero neighbourhood, and getting ready for an automated vehicle future.

Civic Data Trust

Independent governance over the collection and use of urban data, to protect privacy, promote innovation, and safeguard the public interest.



Baseline Program*

- **93% Residential**
- **7% Commercial / Retail**
- **3,100 Residential Units**
- **6,200 Residents**

*Approx. based on zoning maximums

Sidewalk Toronto Proposed Site Plan

- **68% Residential** (11% Flexible Loft Space)
  - 20% affordable housing (incl. 5% deep)
  - Up to an additional 20% Middle-Income Housing (incl. 5% shared equity)
- **20% Commercial** (3% Flexible Loft Space)
- **12% Flexible Lower Floors** (Stoa: Retail, Production, Arts, Community)
- **2,500 Residential Units**
- **5,000 Residents** (approx.)

Jobs Located at Quayside

- **3,900 Jobs** (approx.)
  - 3,400 Office
  - 275 Retail
  - 150 Production
  - 75 Community

SIDEWALK TORONTO

26


SIDEWALK
TORONTO
THANK YOU

Pages 300 to 307
are withheld
pursuant to paragraphs
20(1)(b), 20(1)(c) and 20(1)(d)
of the *Access to Information Act*

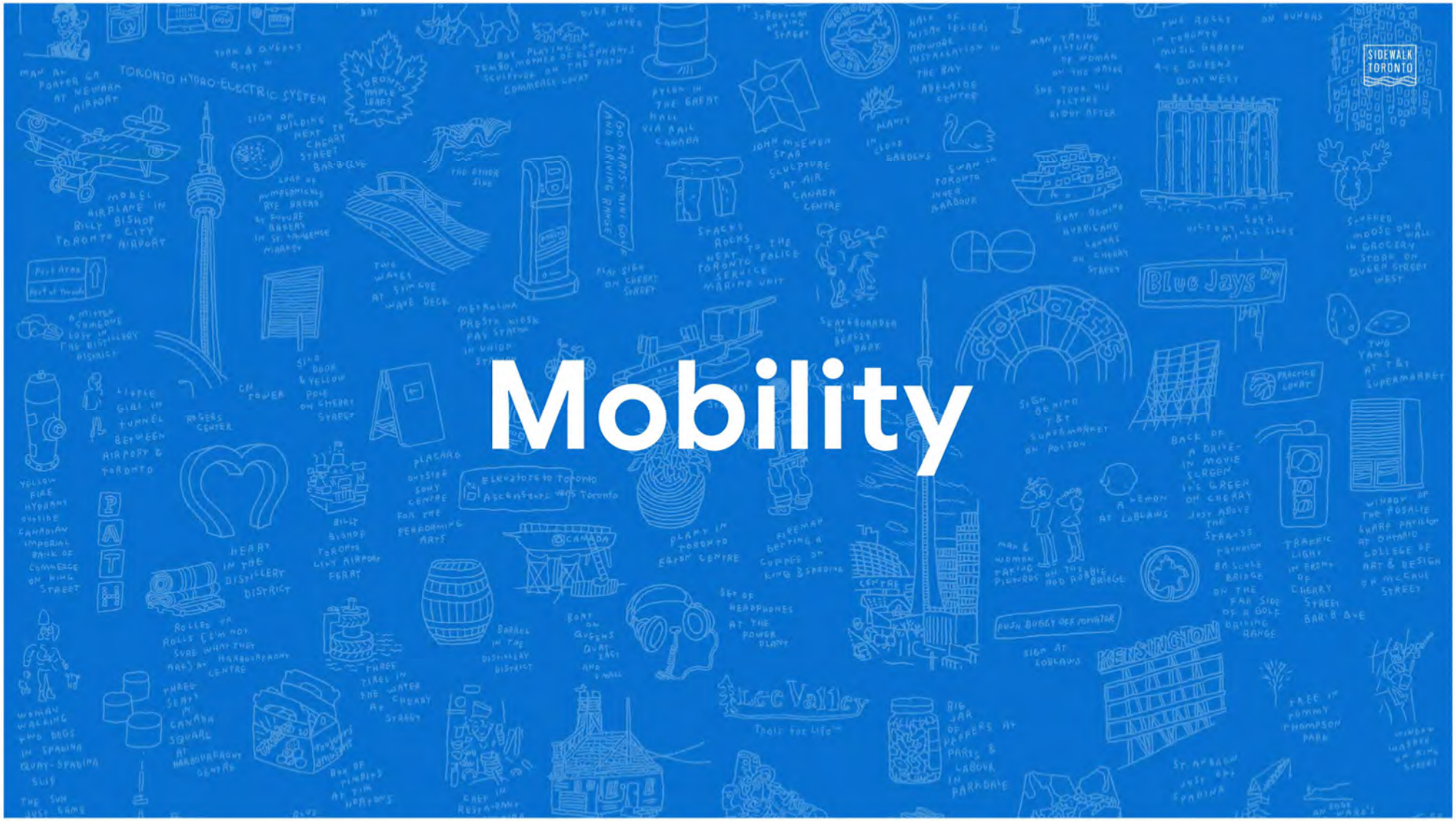
****

Les pages 300 à 307
font l'objet d'une exception totale
conformément aux dispositions des
paragraphes
20(1)(b), 20(1)(c) et 20(1)(d)
de la loi sur l'accès à l'information

QUAYSIDE MIDP BRIEFING FOR IGSC REPRESENTATIVES

Mobility: Rit Aggarwala
Sustainability: Charlotte Matthews

DECEMBER 10, 2018


Mobility

Quayside Transportation

01

Allow fast, reliable, comfortable trips to and from the neighbourhood via walking, cycling, and transit (i.e., non-auto modes).

02

Over time, reclaim space for the public realm, while preserving access for private autos.

03

Provide for a future of new mobility options like AVs, mobility as a service.

The proposed transportation system in Quayside will...

SIDEWALK TORONTO



3

Transit objectives set by WT

WT Criteria	MIDP Volume 2 Content
Improve connections to the transit network, including first/last mile challenges	1. Extend Waterfront LRT and bus 2. Improve comfort and safety of walking and cycling through speed-separated streets and priority treatments via traffic signals and bike path LEDs 3. Co-locate bikeshare, e-bike/e-scooter parking/charging with transit stops for mobility hubs (see Vol 1) 4. Note: have not identified any significant first/last mile challenges because LRT routes allow direct access to major nodes (Union Station, Broadview subway station, and future East Harbour Station and DRL stop at Sumach & Queen)

EV objectives set by WT

WT Criteria	MIDP Volume 2 Content
Increase use of EVs to replace carbon-emitting vehicles	1. Provide Level 2 chargers at on-site parking garage at 15% of 500 spaces - install infrastructure to upgrade to 100%. Commit to EV charging at off-site parking facilities and discounted rates for EVs.

AV objectives set by WT

WT Criteria	MIDP Volume 2 Content
Leverage potential future benefits of Autonomous Vehicles (AVs)	1. Increase ped/bike space since AVs need less space than human drivers to maneuver 2. Introduce speed separated streets and advanced traffic and curb management that carry vehicle traffic since AVs can be compelled to follow rules

WT impact criteria

WT Criteria	MIDP Volume 2 Content
Reduce the cost, climate impact and convenience for the average user and transportation of goods	1. Pilot a smart container that ensures peace of mind for package security and user-input delivery locations 2. Provide a mobility package at ~$240/month that saves $9,900/yr compared to owning a private car (TTC alone costs $146/month) 3. Present mobility package services through a user-interface for Quayside - and provide integration ability for commonly used apps 4. Reduce the auto usage from 26% to 11% with mobility options (pending modeling confirmation) 5. Reduce the number of trucks by (~50%) per day with logistics hub (pending modeling confirmation) 6. GHG emissions reductions for mobility initiatives, including EV, will be shown on Page 8 chart (pending modeling results)

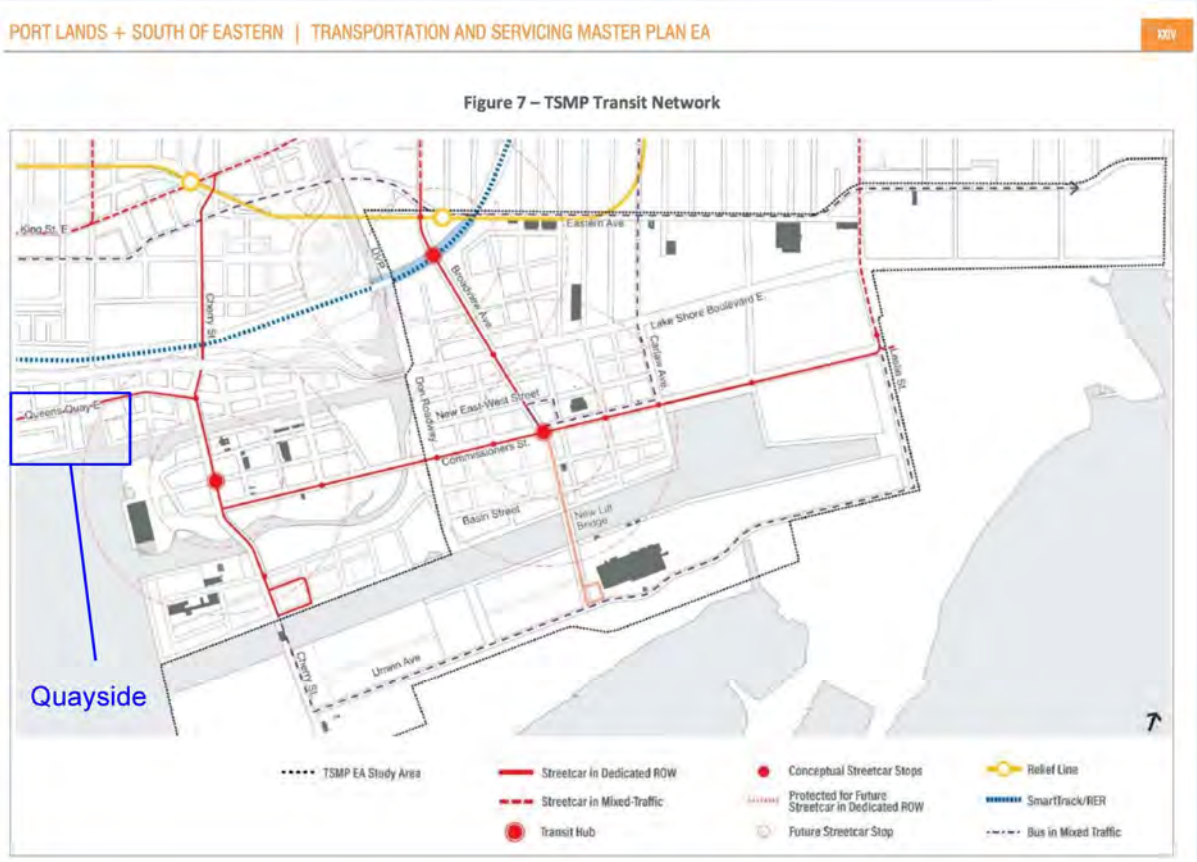
Vision for the Mobility System

Transit Backbone	Knit the neighbourhood into into the City of Toronto's existing high-volume, backbone LRT system
Widespread Cycling and Walking	Make cycling and walking significant mode choices by improving comfort and range with materials, design, and data
Shared New Mobility Replaces Auto Ownership	Autonomous, electric, and connected vehicles replace private auto ownership
Freight Transit	Make moving freight (and outbound waste) simple and cheap for everyone, using smart containers and robots to eliminate the friction surrounding moving goods
An integrated transportation management district	Manage mobility for all users through a system that will optimize access, with the ability to manage parking and curbside drop off, transit and other mobility services as one package, and eventually road pricing on autonomous vehicles
Streets for People	Redesign urban streets for all users to make streets dynamic and to take full advantage of AV benefits

Transit backbone: build the already-approved Eastern Waterfront LRT

In January 2018, City Council endorsed the Waterfront Transit Network Plan and directed staff to study options for the Union Station connection, targeted for completion in early 2019.

Sidewalk Labs agrees that this extension of the streetcar/LRT network is the best solution for connecting Quayside to the larger Toronto area.



With the full-build LRT, transit connects Quayside to all Corners of Toronto & the GTA



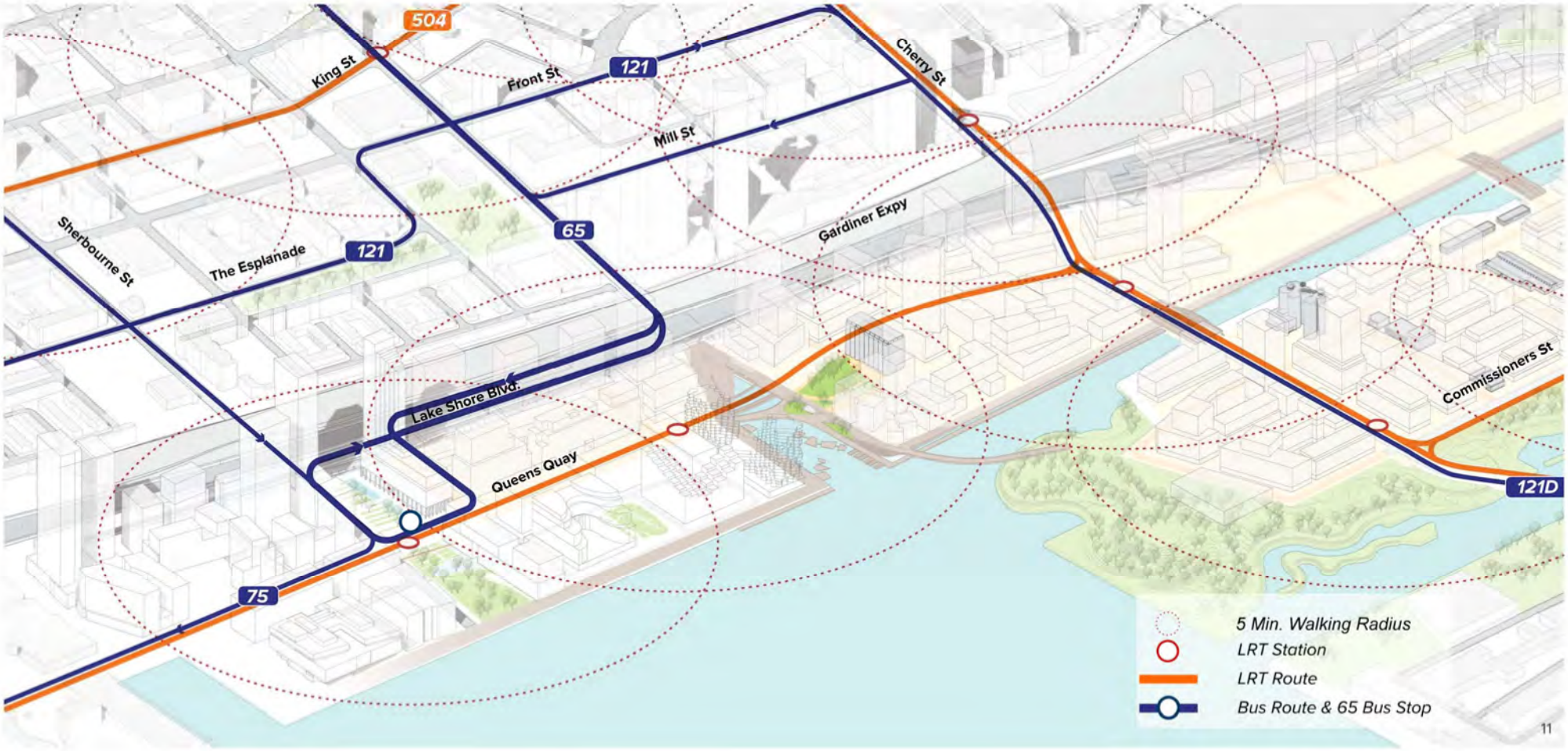
Potential Transit Level of Service & Projected Travel Times

Travels Between	Frequency	Travel Time
Union Station ↔ Queens Quay & Parliament	509 LRT (12,6) vehicle / hour (peak, off-peak)	8 min.
East Harbour Station ↔ Queens Quay & Parliament	509 LRT (12,6) vehicle / hour (peak, off-peak)	10 min.
Broadview Station ↔ Queens Quay & Parliament	Broadview LRT (7.5,4) vehicle / hour (peak, off-peak)	20 min.



Mass transit expansions, as recommended by the Waterfront Transit Reset plan

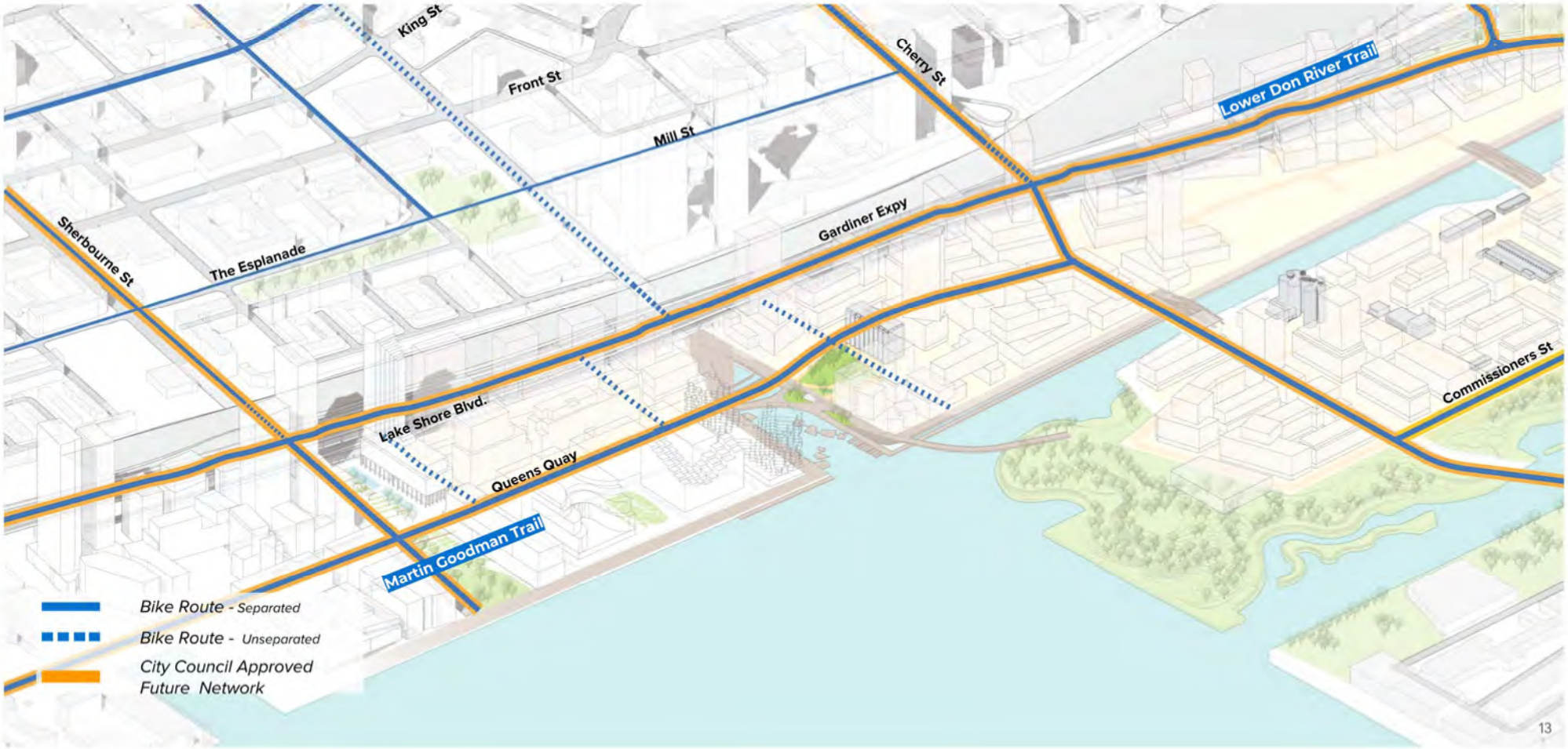
Transit: Potential Light Rail and Bus Routes



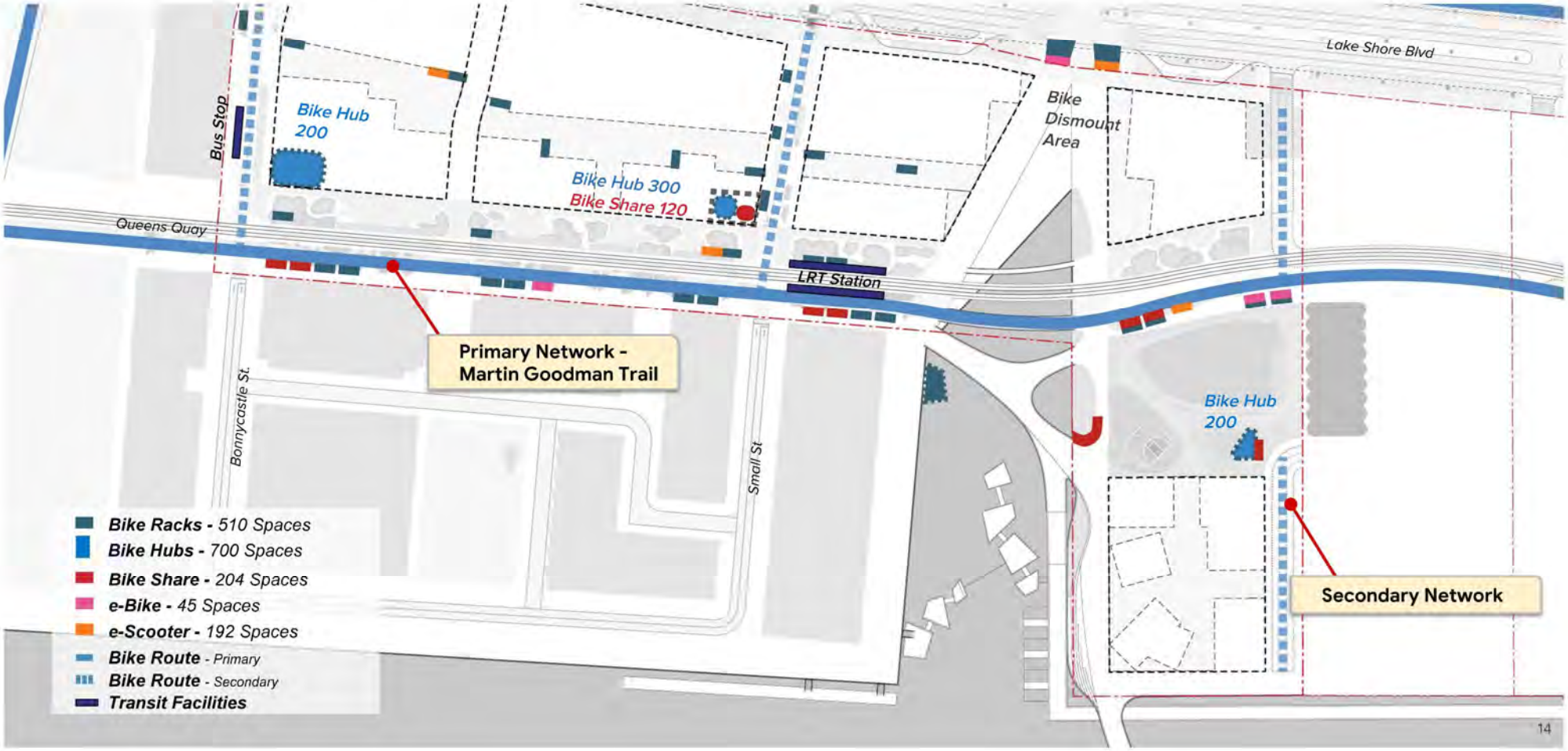
Walking & Cycling: **Pedestrian Circulation**



Walking & Cycling: **The Bike Network**



Walking & Cycling: **Bike Paths, Parking, and Sharing**



Automobiles: Legacy vs. Autonomous Vehicles

LEGACY VEHICLES...

are the sort of vehicles we're all familiar with. Most notably, they are driven by humans.

AUTONOMOUS VEHICLES...

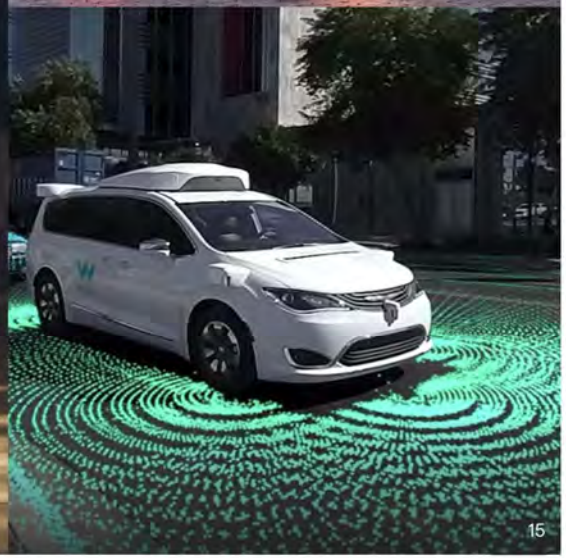
use radar, LIDAR, and cameras to constantly scan their environment, while a computer driver navigates the road, stopping, starting, accelerating and braking, and turning as necessary to get the car to its destination.

Some autonomous cars will still permit (or even require) human drivers to handle unusual conditions, but some will do without human drivers entirely.

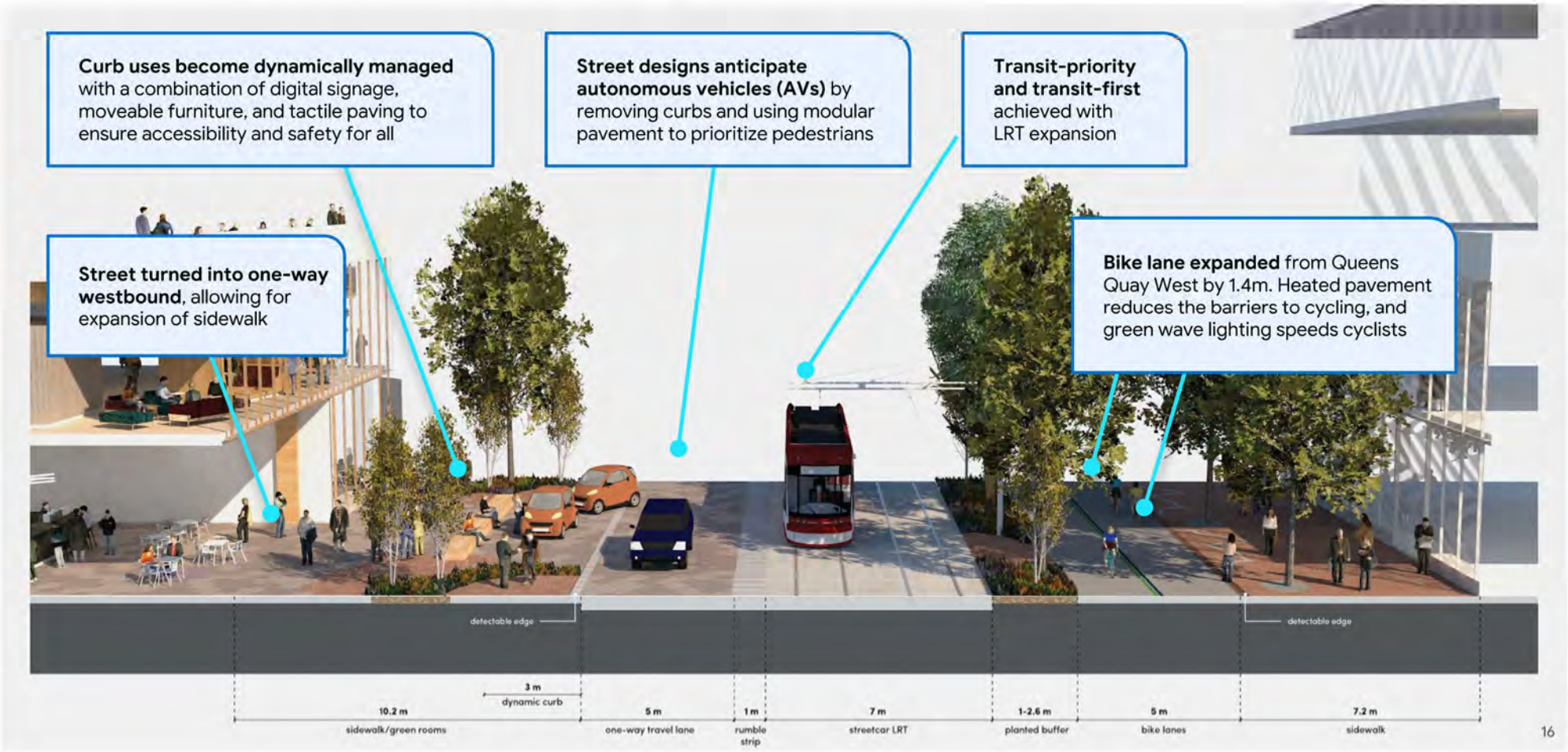
Sidewalk Toronto anticipates a future of autonomous vehicles, in which cars can be counted on to take people on trips without risk of careless or distracted driving, reducing risk to passengers and other road users alike.







2025 Design: Queens Quay to Adapt for Future as One-Way Interim Solution

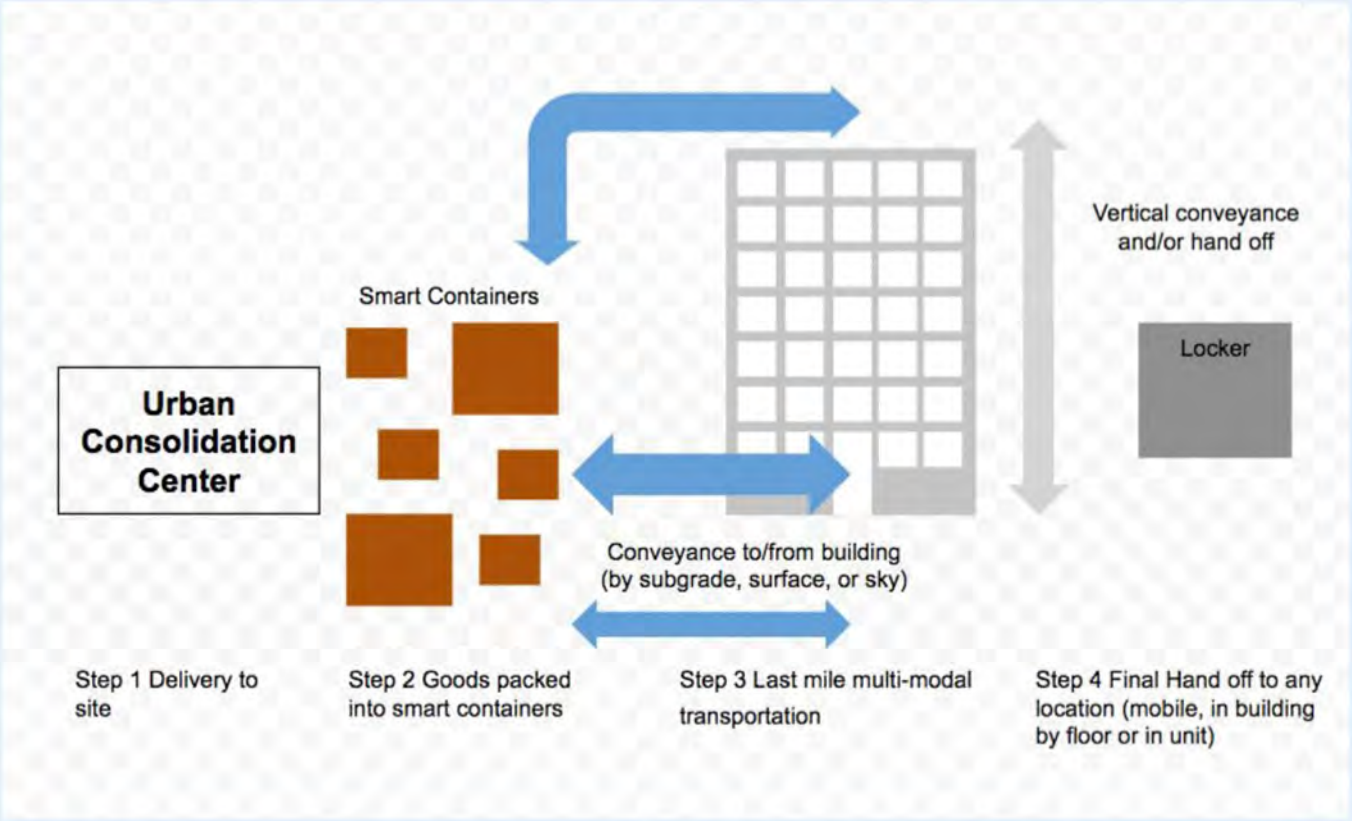


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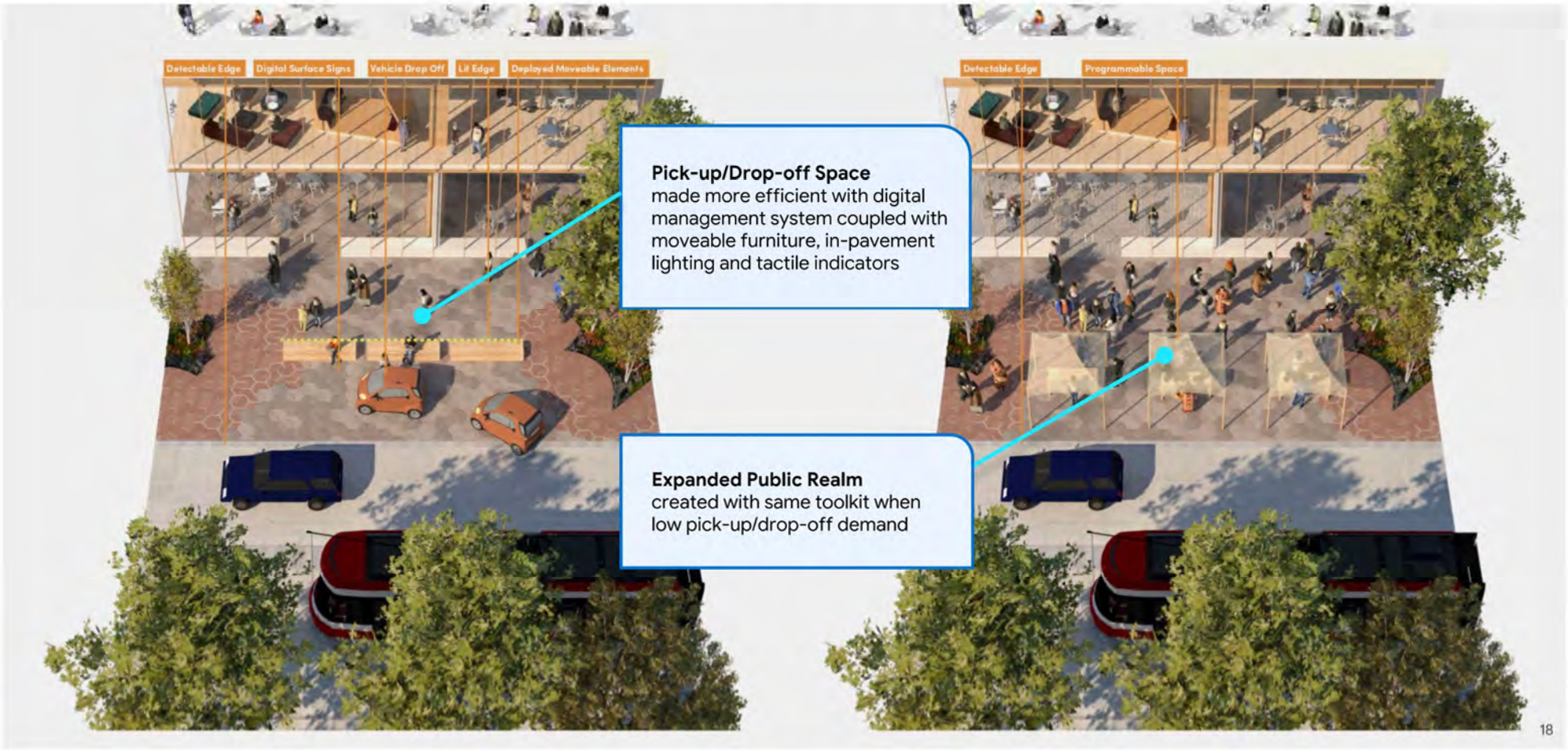
Freight transit

Quayside's freight system will make **moving goods (and outbound waste) efficient, simple and cheap** for everyone.

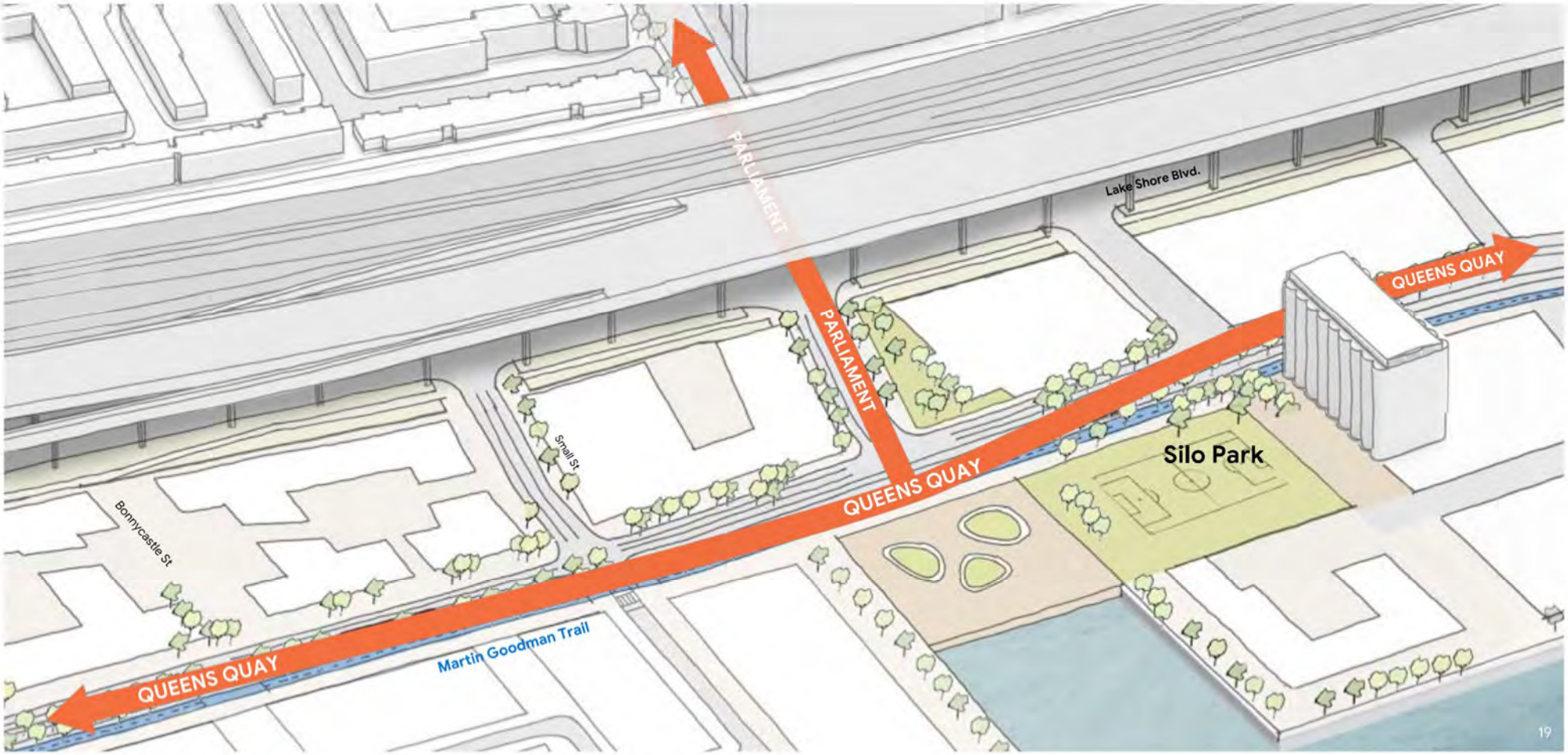
The core technology for this is multi-modal transportation, smart containers that enable tracking and chain-of-custody management, and receiving stations that guarantee no more 'failed first attempts'.



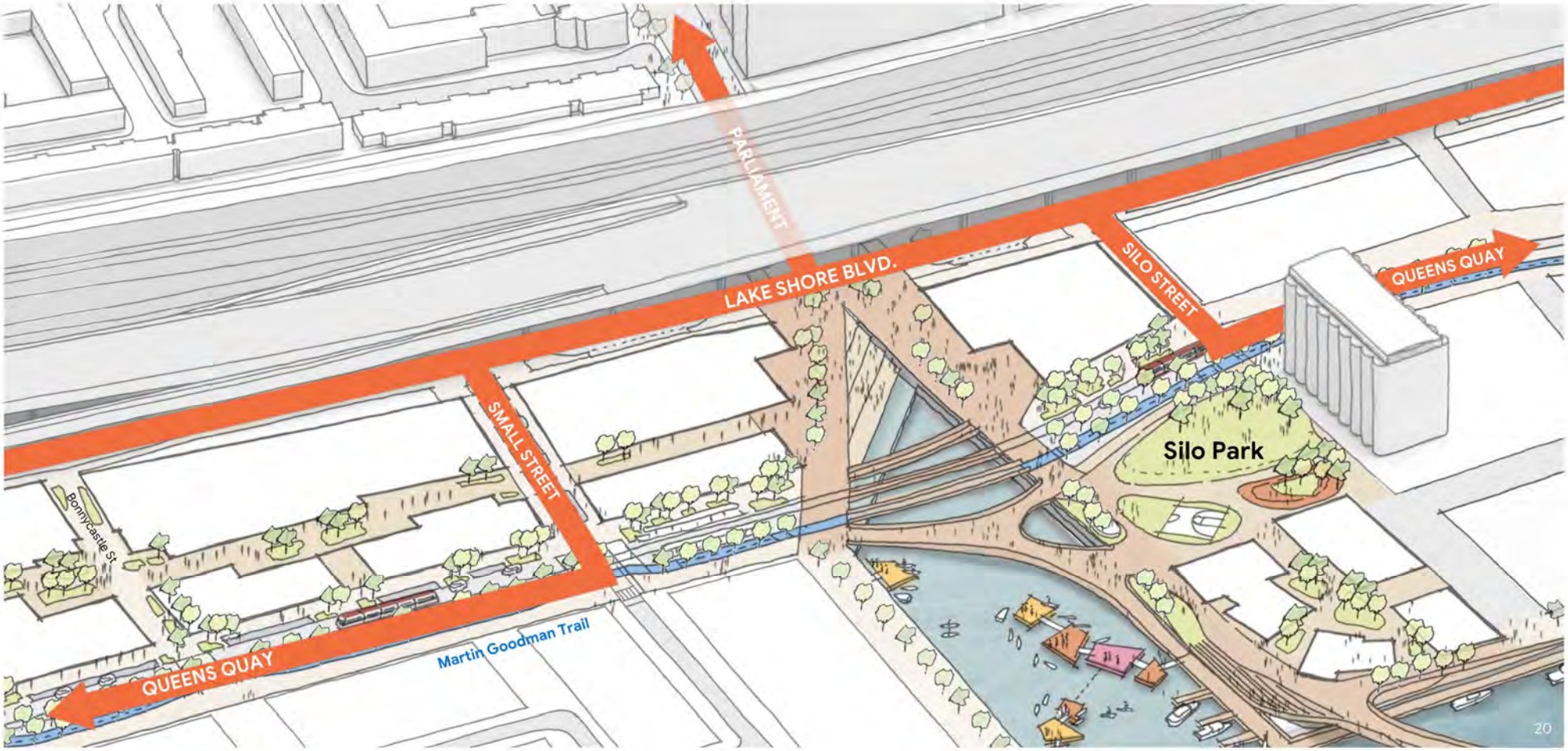
Managing Transportation Demand: the **Dynamic Curb**



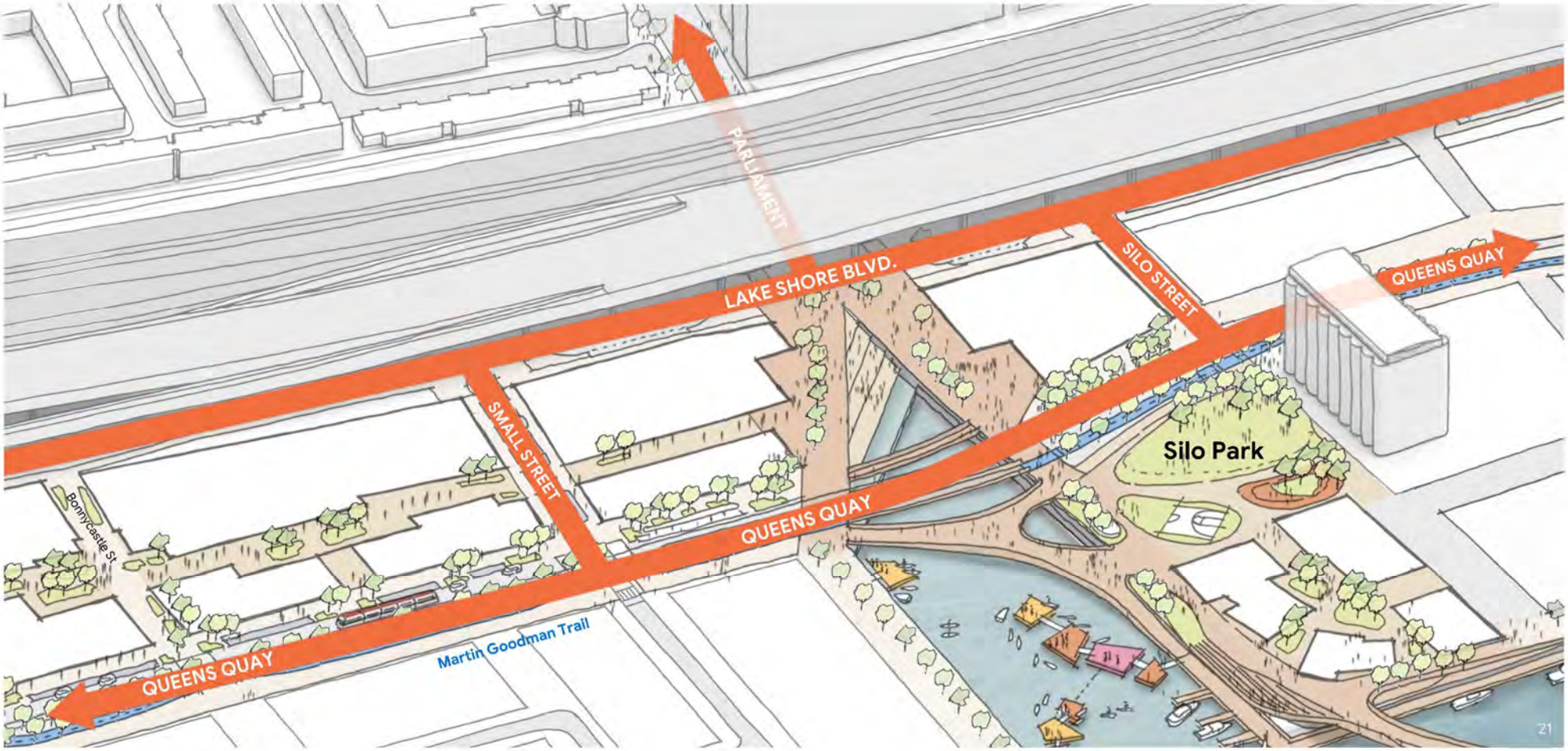
Streets for People: Precinct Plan baseline



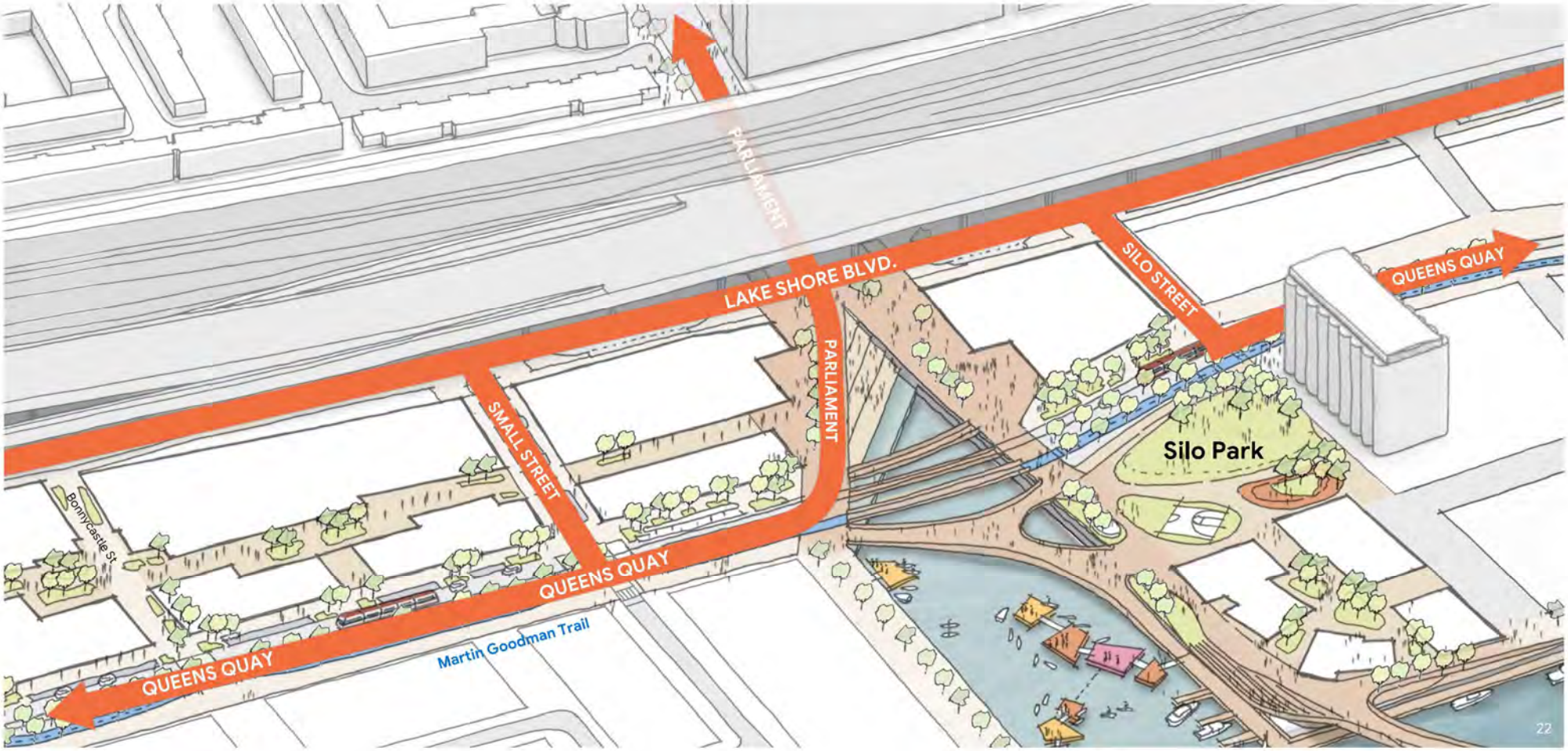
Exploration 1 — Parliament Plaza: No Vehicles in Parliament Plaza



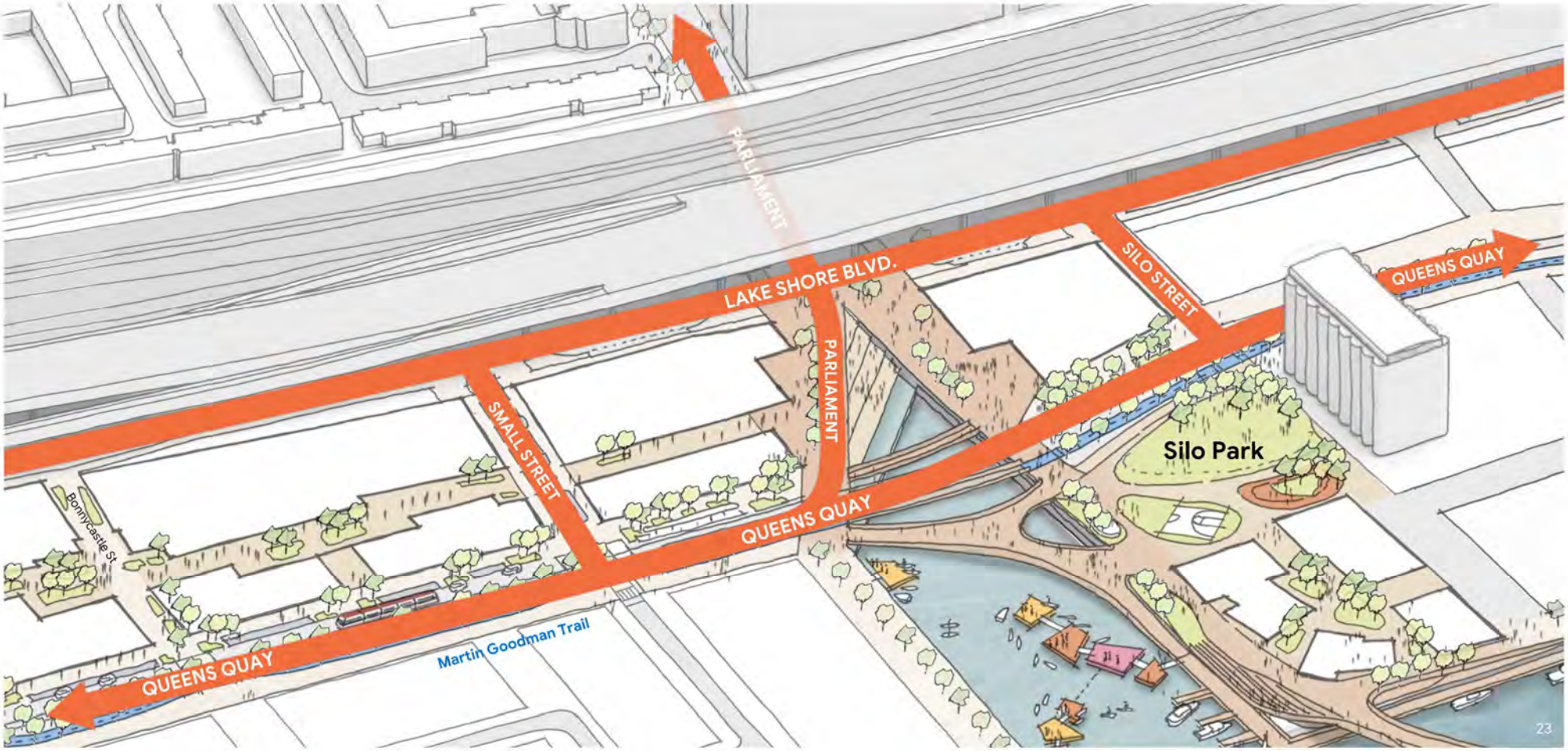
Exploration 2 — Parliament Plaza: East ↔ West Vehicular Connection



Exploration 3 — Parliament Plaza: North ↕ South Vehicular Connection



Exploration 4 — Parliament Plaza: N ↕ S and E ↔ W Vehicular Connections




Sustainability

Sidewalk Toronto: Our Vision for Sustainability

A new standard of sustainability that builds on Waterfront Toronto and government leadership to create **a blueprint for climate-positive communities**.

We are creating a **fossil-fuel free, resilient neighbourhood** with **sustainable material use** and an **ecologically-enriched public realm.**

25

Snapshot: Alignment with City of Toronto Policy Priorities

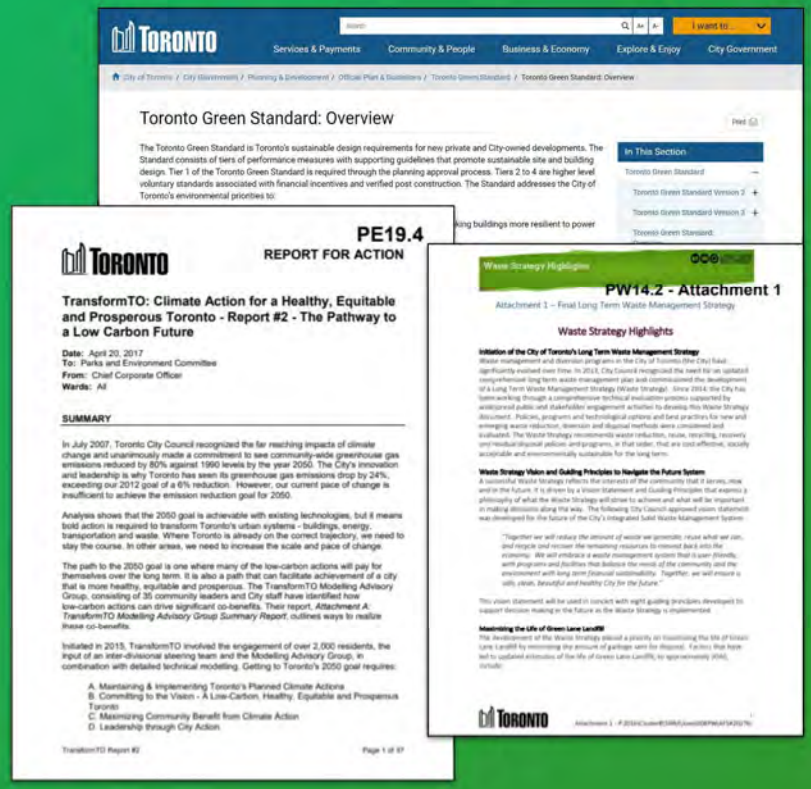
Toronto Green Standard Version 3

Toronto Green Streets Technical Guidelines

Long Term Waste Management Strategy

TransformTO

Wet Weather Flow Management Guidelines



Snapshot: Alignment with Ontario Policy Plans

Ontario

Ontario's Environment Plan

- Protecting our Air, Lakes and Rivers
- Addressing Climate Change
- Reducing Litter and Waste
- Conserving Land and Greenspace

Ontario's Great Lakes Strategy

Ontario's Tall Wood Building Reference



Snapshot: Alignment with Canada's Environmental Plan

Government of Canada

The Pan-Canadian Framework on Clean Growth and Climate change

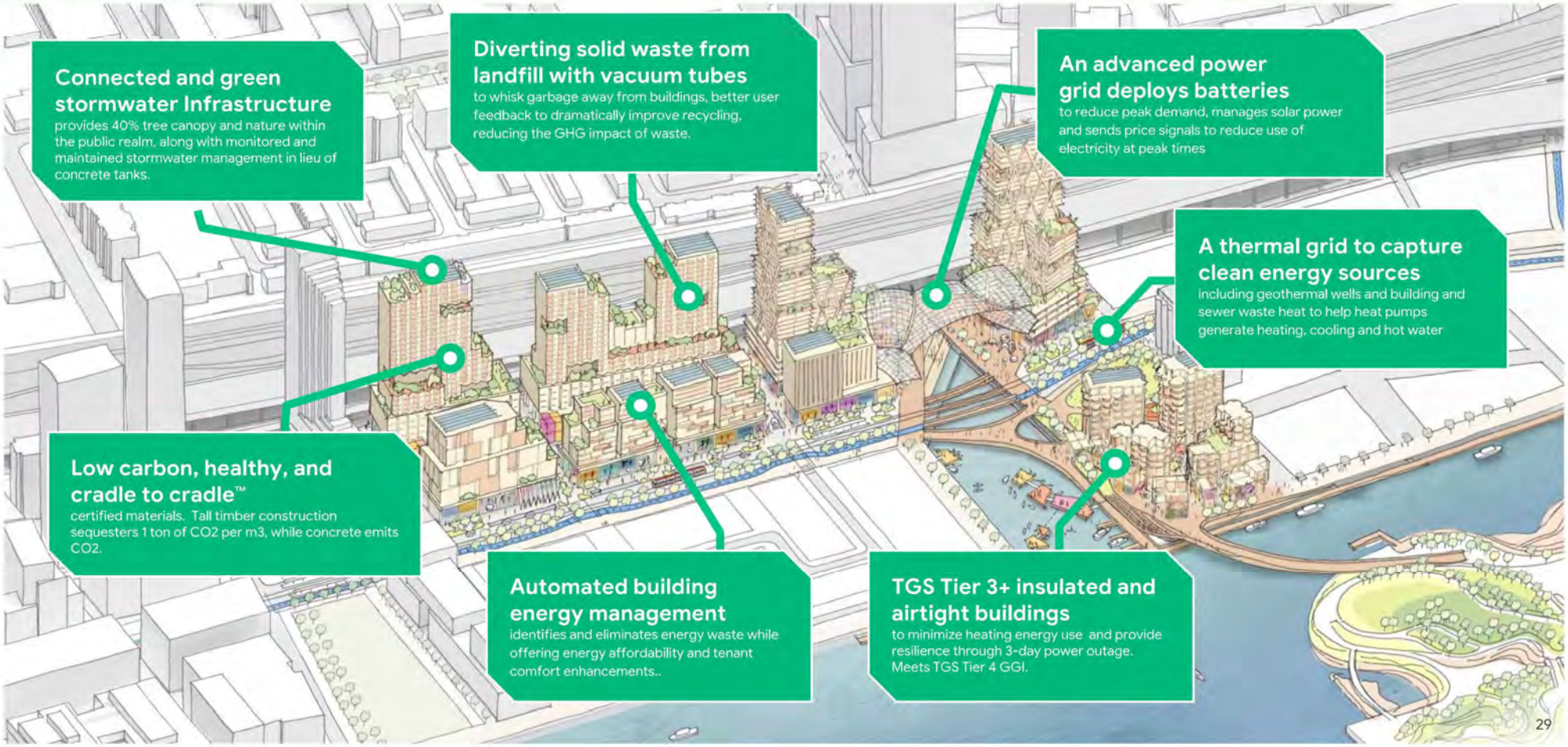
Canada's Mid-Century Long-term Low-Greenhouse Gas Development Strategy

Low Carbon Economy Fund

Expert Panel on Sustainable Finance



Creating a Blueprint Climate Positive Neighbourhood



Radical GHG Reduction Drives Toward Clean Energy

Using clean electricity for heating and hot water is a crucial step to achieving climate positive in Toronto, but it must also be affordable to be credible and scalable.

60%

Percentage of Toronto's GHG emissions from buildings, similar to other dense urban environments globally

GTHA GHG Inventory. TAF, 2017

87%

Percentage of building GHG emissions in Toronto are from the combustion of natural gas for heating and hot water

GTHA GHG Inventory. TAF, 2017

5x

Electricity prices are 5x as much as natural gas, but clean electricity is critical to GHG reductions

Published rates, Ontario. 2017

Sidewalk Toronto's Approach to Affordable Electrification

No Natural Gas Infrastructure

Use heat pumps and fossil-fuel free energy harnessed by thermal grid in lieu of boilers and maximize solar potential on rooftops

Manage Electrical Demands

To maintain typically-sized infrastructure, develop and operate low load buildings, install battery storage and employ dynamic "time of use" utility pricing

Eliminate Energy Waste

Weed out the electricity use no one cares about or that actually degrades comfort, like overheating and air-conditioning

= Affordable Electrification

31

Sidewalk Toronto's Approach to Affordable Electrification

Technologies & Infrastructure



Ontario power, distributed through Toronto Hydro, is 90% GHG-free; reminder is high-GHG at peak time



Rooftop solar PV yields 924 KW (9% of peak demand); available for community "subscription"



Energy storage to meet >40% of peak demand over 4 hours; owned by Toronto Hydro or other; available for community "subscription"



All-electric transportation including public transit; charging infrastructure for electric vehicles (EV)



Space and hot water heating with heat pumps tied into thermal grid with geothermal wells and sewer heat



TGS V3 Tier 3 TEUI and TEDI and Tier 4 GGI buildings. Designed to stay warm through 3-day power outage.

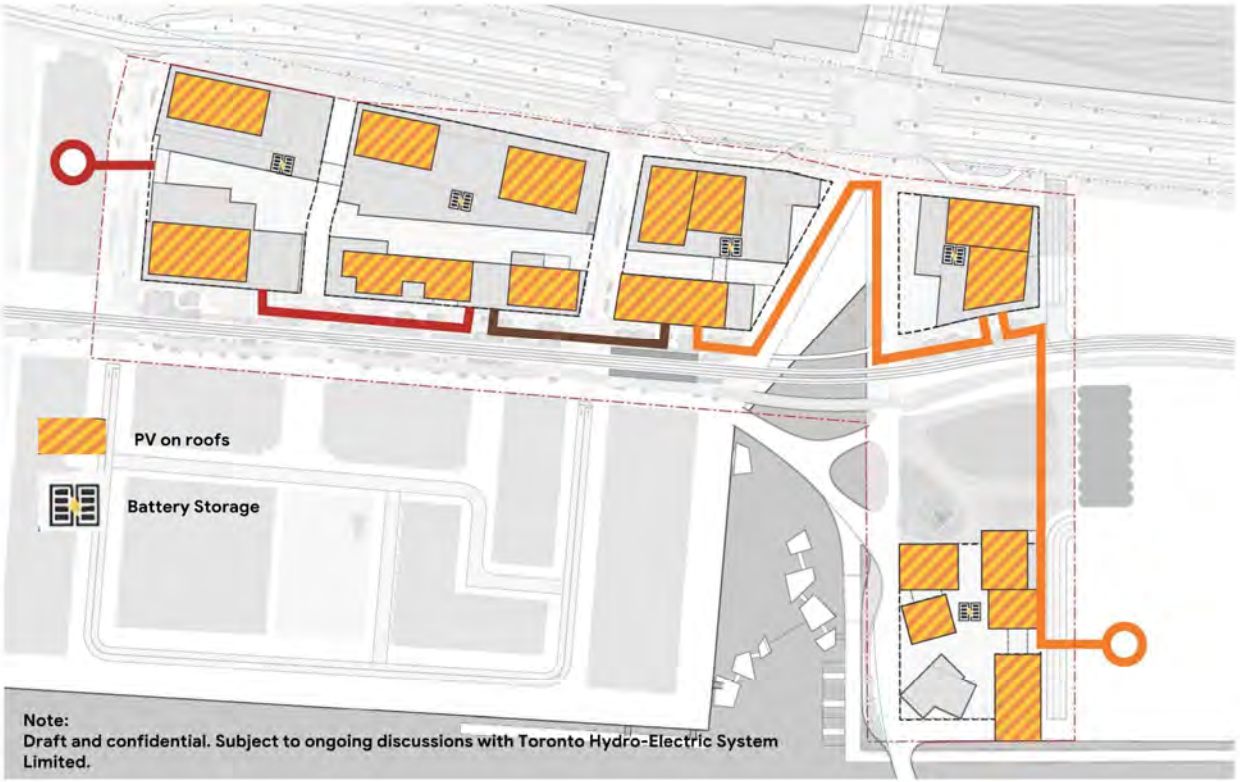


New dynamic rates to reward load-shifting, and use of renewable energy and battery storage



Conversion of TGS modeled targets into operational targets, plus automated equipment control

Resilient Power Grid with Battery, Solar, and Microgrid Capabilities



Designed in partnership with Toronto Hydro to provide flexibility, resiliency and an opportunity to pilot new rates and load management technologies

Resiliency:
Bio-diesel fueled generators will backup critical loads.



Water Source Heat Pumps Require Thermal Grid

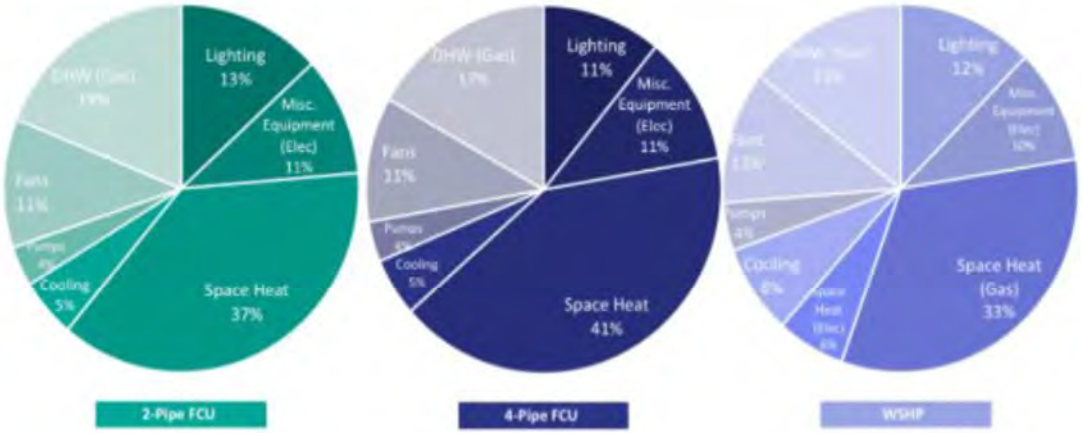


Sidewalk Labs commissioned a study of existing Multi-unit Residential Buildings (MURBs) to quantify and diagnose the "Performance Gap" - the difference between building energy use as modeled and actal.

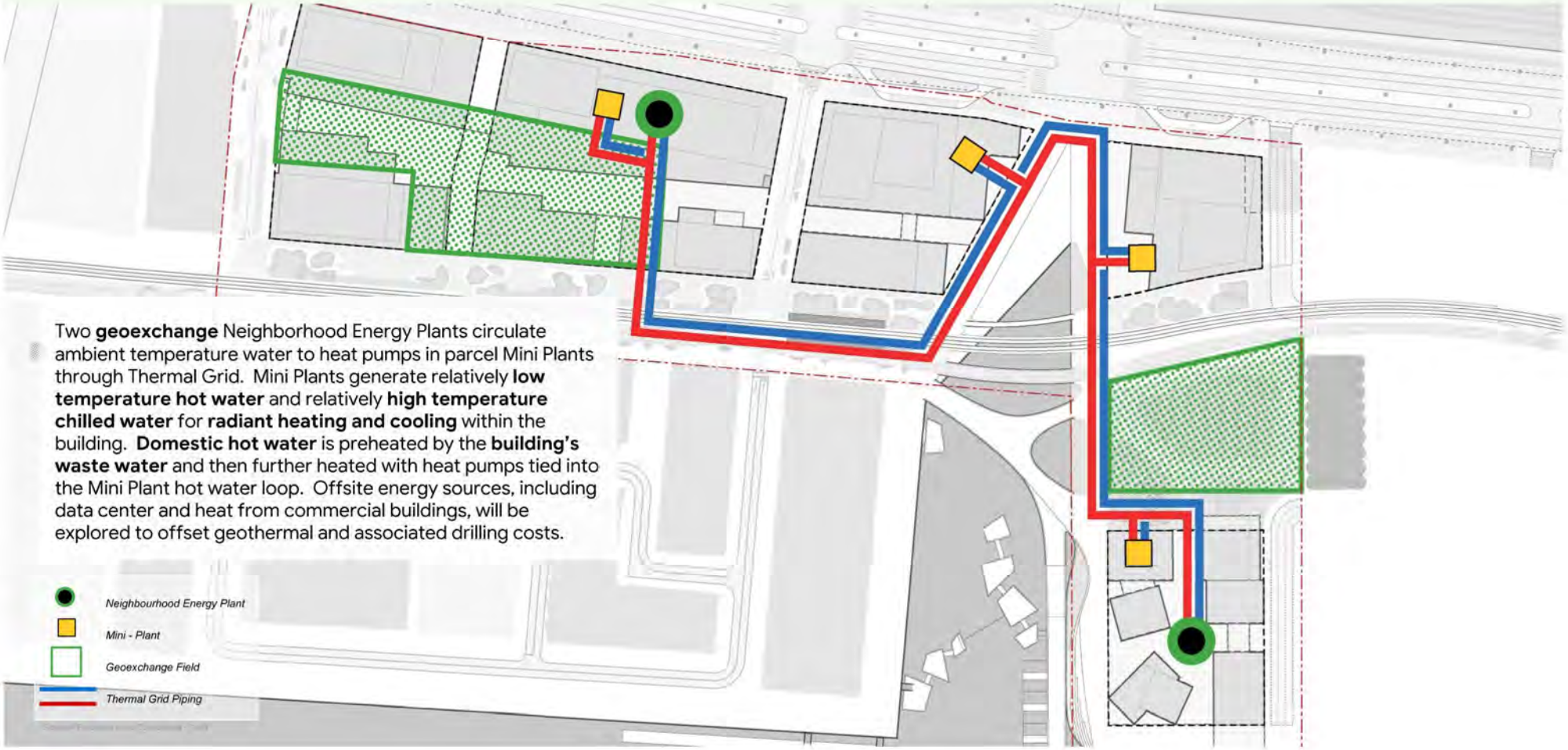
Study of Toronto MURBs found that buildings with water source heat pumps use nearly as much gas as those with traditional hot water heating.

Learning: Heat pump loops require considerable tempering, most often provided by boiler fed hot water.

End use energy breakdown of Toronto MURBs, categorized by HVAC system type.



Quayside Plan: Fossil Fuel Free Thermal Grid



Scaling Fossil Fuel Free Thermal Grid Across Portlands

Beyond Quayside boundary, there are more cost effective energy sources to geothermal

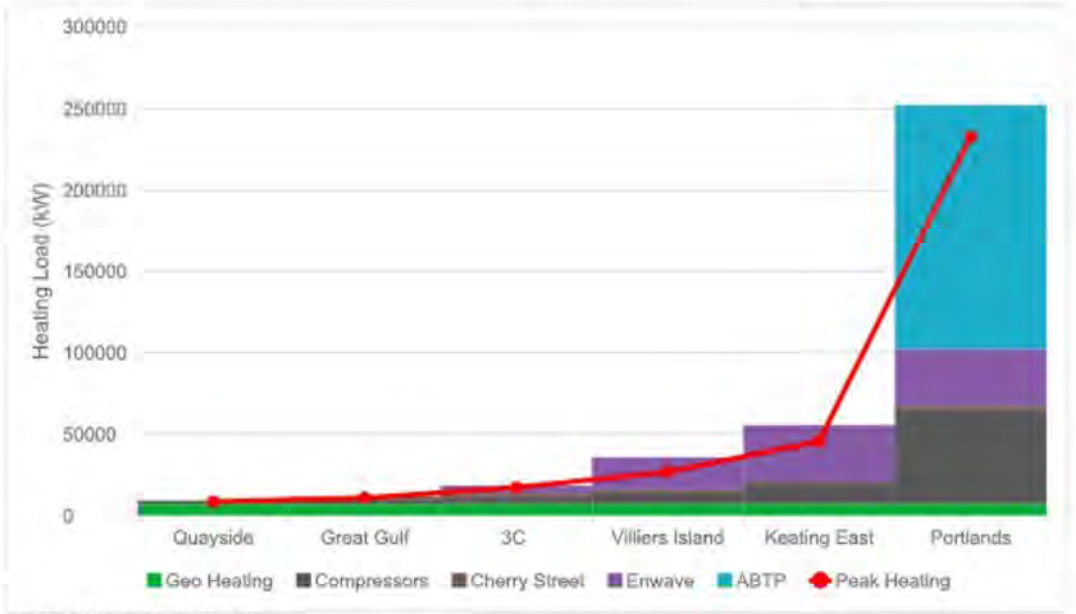
Parcel Mini Plant
Winter hot water supply: 45°C
Summer chilled water supply: 5°C

Geoexchange
Winter: -1°C
Summer: 35°C
Est. Construction Cost: $3,500/kW

Enwave Chilled Water Return
Winter: 10°C
Summer: 5°C
Est. Construction Cost: $1,000/kW

Sewage Heat Recovery
Winter: 15-18°C
Summer: 25°C
Est. Construction Cost: $2,000/kW

Costs are high level and based upon consultants' equivalent project experience; no engineering study conducted

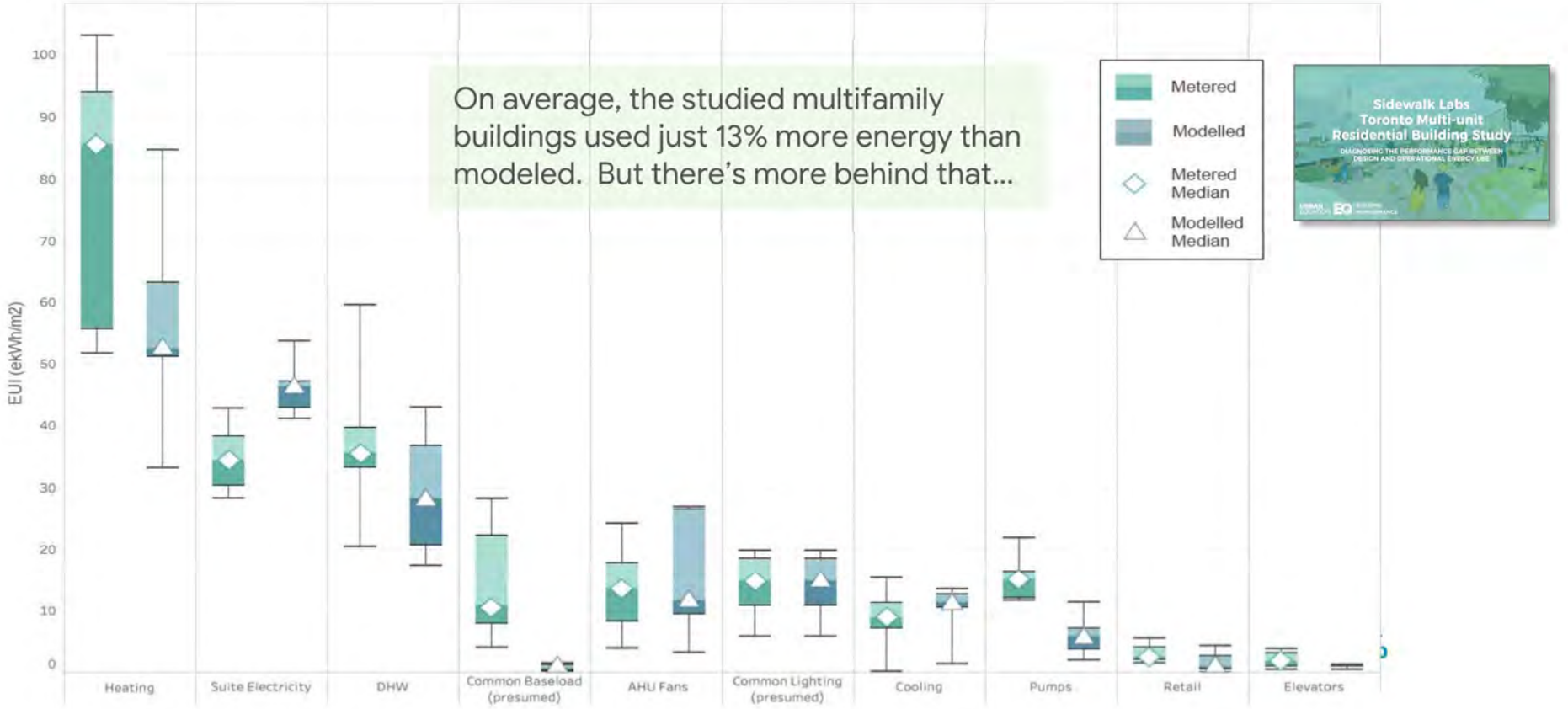


Heating Capacity vs Load

**Subject to detailed hydraulic analysis with Toronto Water.*

Sidewalk Proprietary and Confidential - Draft

Modelled vs. Metered Energy Use of Recent Toronto Multifamily Projects



37

What Makes Reducing Building Energy Demands So Hard

Developers Demonstrate Code Compliance with Energy Models



Studies show that buildings generally use more energy than their code compliance models and green building ratings predict and energy use intensity (kWh/m2) varies widely between buildings, even those of a similar age and rating.

Tenants Do Not Respond to Utility Price Signals without Automation



Time-of-use utility rate pilots with automated control of thermostats, water heaters and appliances show significantly greater peak demand reductions and customer cost savings than those without.

Tenants are Not Actively Controlling the Energy Uses Under Their Control



Well over half of building energy use is attributable to tenant space temperature, hot water, lighting, and plug loads. No one in the office is actively controlling these uses with an eye to waste or cost.

So Much Equipment Is Operated According to a PreSet or Left On



Most equipment is run with a "set it and leave it" approach. This wastes energy and can even degrade comfort in the gap between the programmed setting and schedule and what tenants want and when they want it.

A New Tool to Eliminate Energy Waste in the Office and Core Systems

More comfortable, responsive office spaces with improved energy efficiency and less effort to control building systems.

Fully Responsive Spaces



AB Office responds fully and fairly to tenant comfort requests

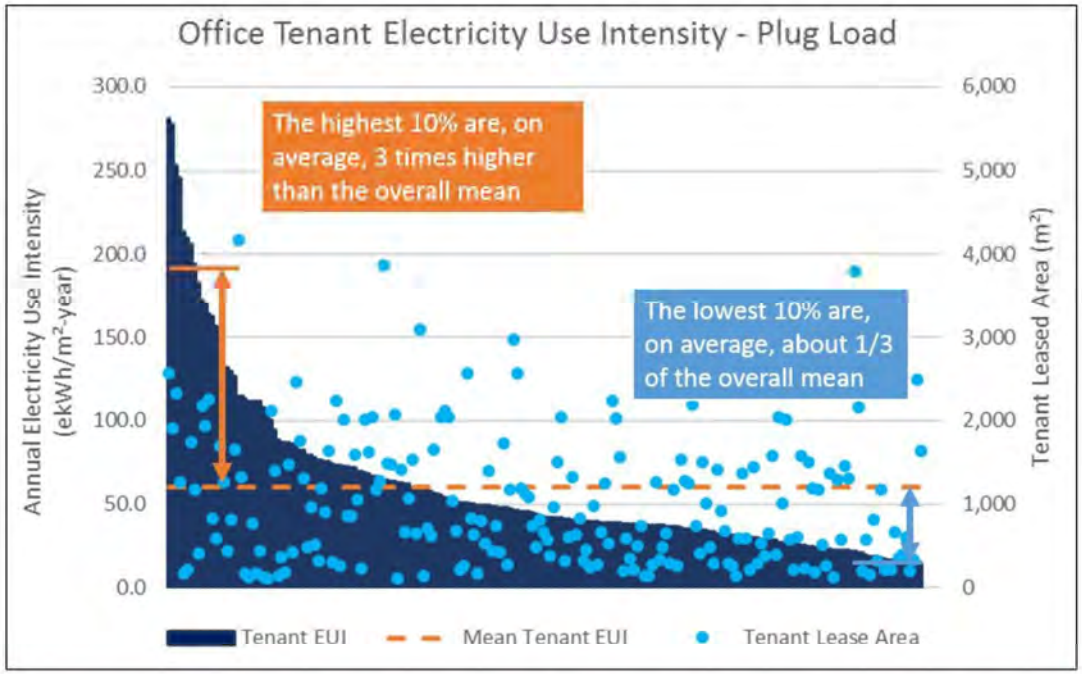
Operational Efficiencies



AB Core Systems handles a lot of the nuisance in managing a building.

39

Delivering Low Load Buildings Must Extend into Operations



In-suite office electricity loads (plug loads and lighting) for about 75 sub-metered tenants in Toronto office buildings.

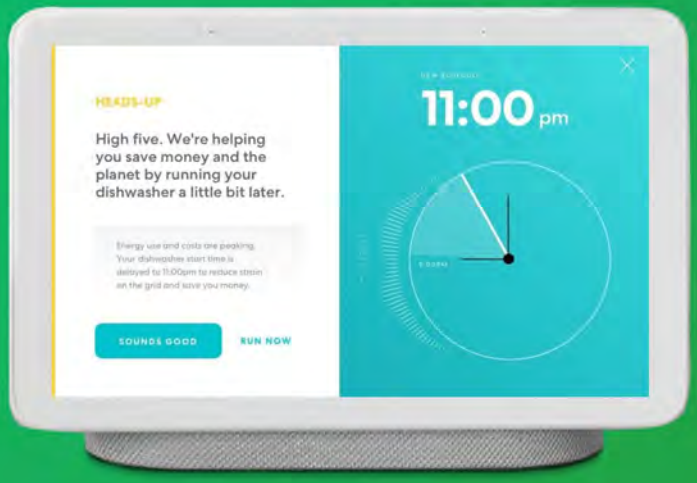
Sidewalk Labs commissioned a study of Commercial Office buildings in Toronto and Canada to understand the breadth of building and tenant energy use.



New Solutions: Enabling Predictable Energy Bills for Residents



Smart Adjustments

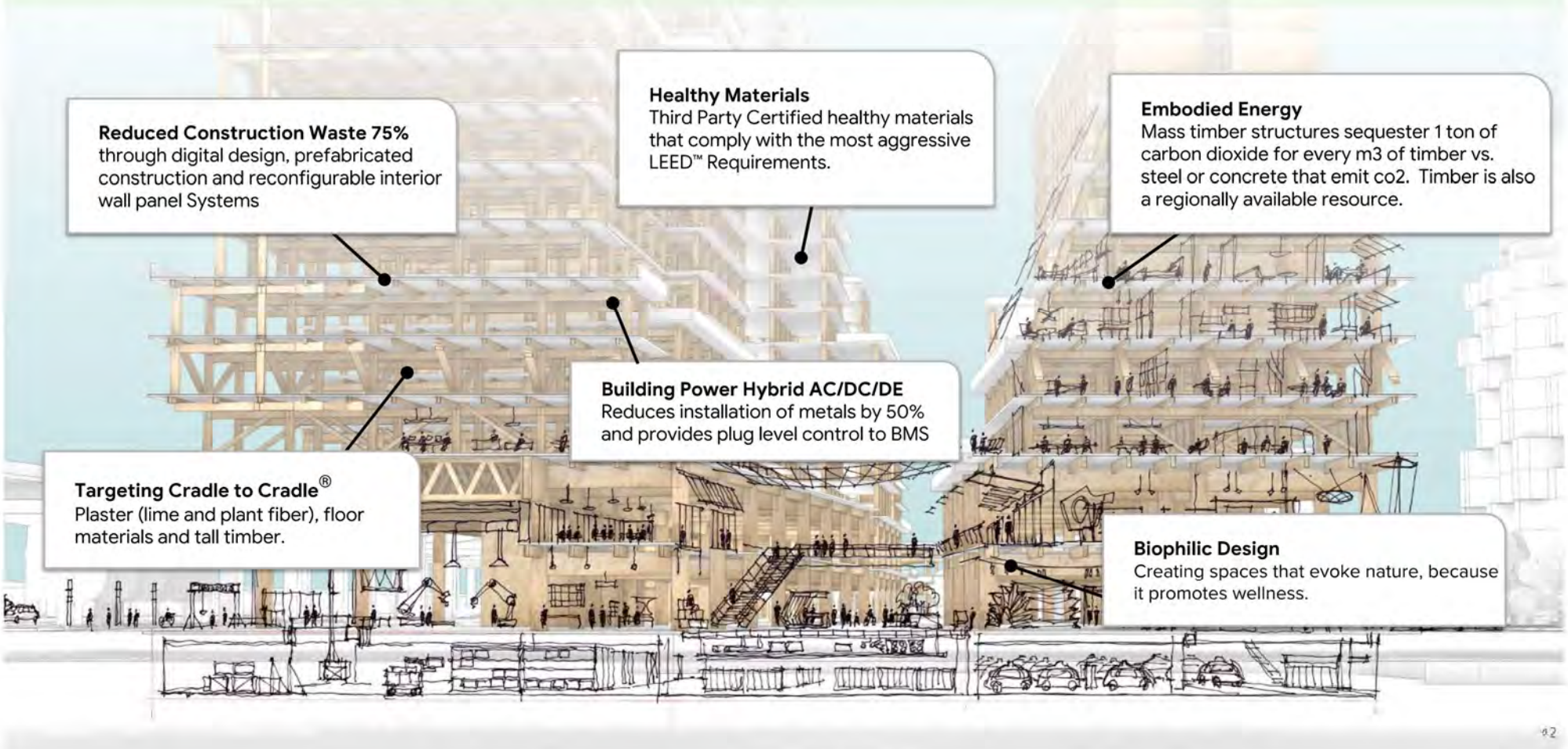


Scheduling activities throughout the home based on peak energy times to prevent unnecessary cost and greenhouse gas emissions.

Helping residents manage their utility bill through automated responses to utility price signals and recommendations on solar PV and battery share purchases.

Sidewalk Proprietary and Confidential - Draft

Sustainable Buildings are About More Than Energy



More Nature in Urban Settings and Stormwater Management

Reduce Heat Island Effect
Plants shade surfaces, reflect radiation, and release moisture to cool the urban environment

Enhance Biophilia
Natural landscapes improve health and well being in the built world while embracing the seasons

Reconnect with Lake Ontario
Land-Water Scapes direct the public to the waterfront with the natural flow of streams

Design for Tomorrow
Permeable modular paving melds the artistry of the street with sustainable water treatment

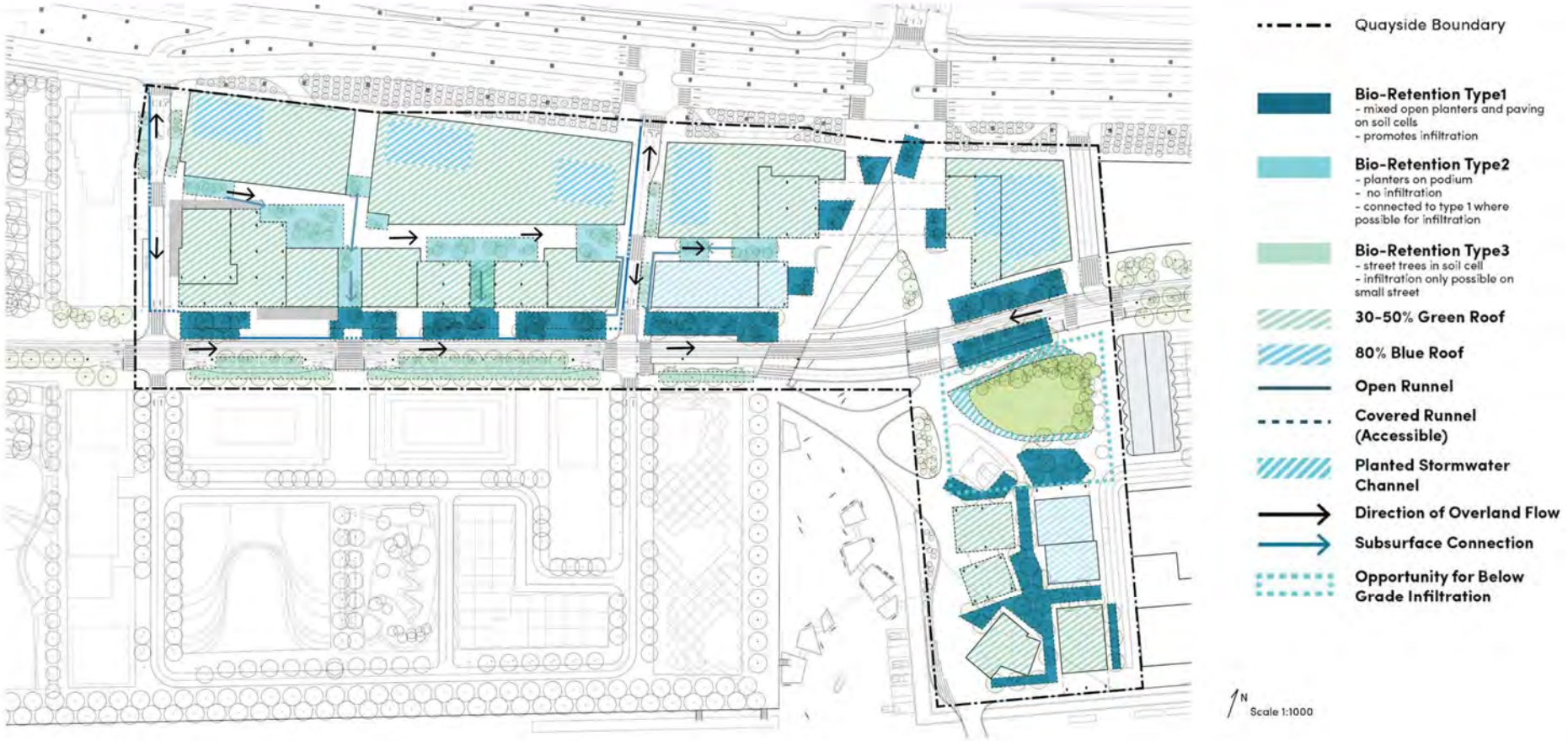


Toronto gets about 10 percent more rain per year than it did in the mid-20th century.

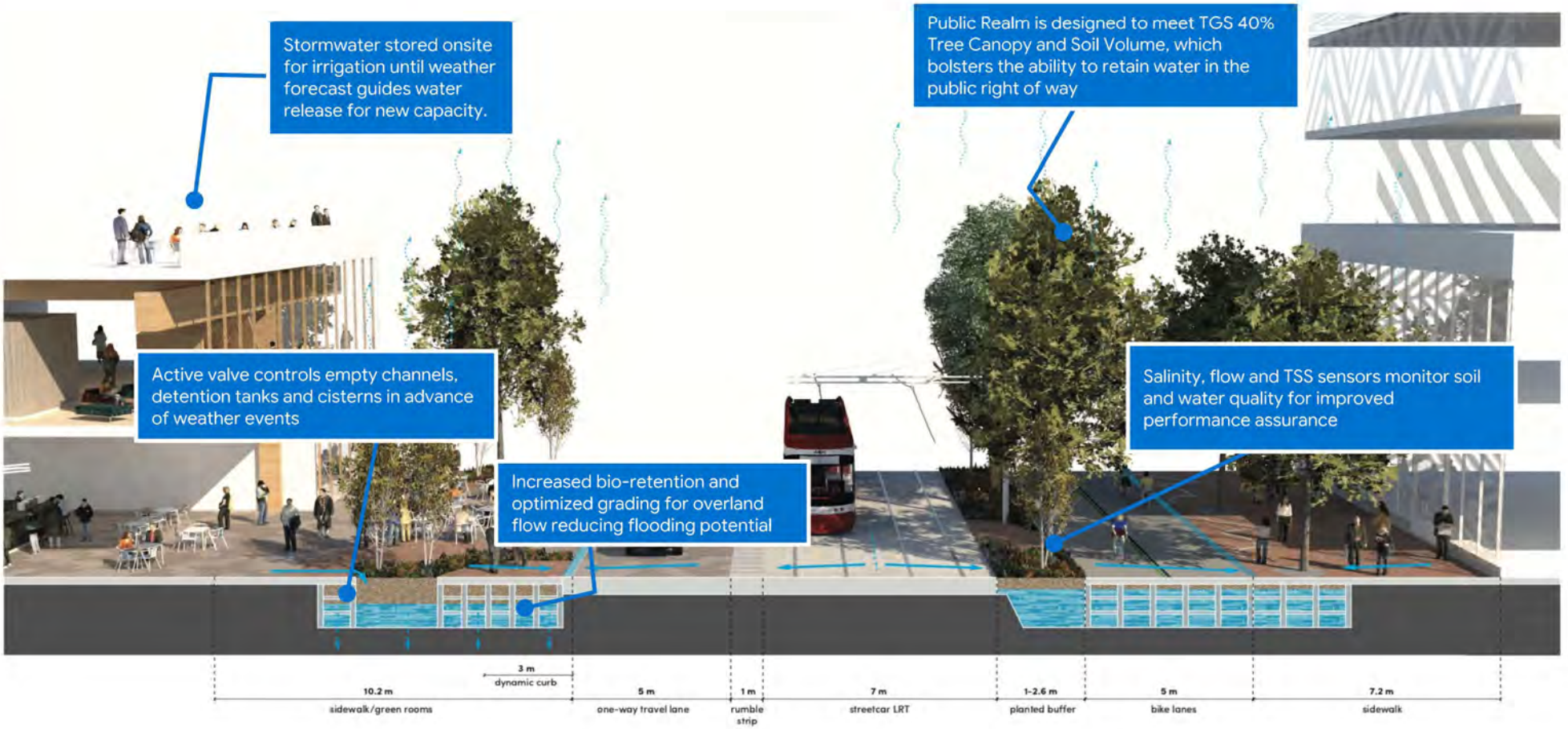


And in the past five years, Toronto has endured two 100-year storms.

Site Plan of Green Infrastructure for Stormwater and Tree Canopy



Queens Quay East Section of Green Infrastructure

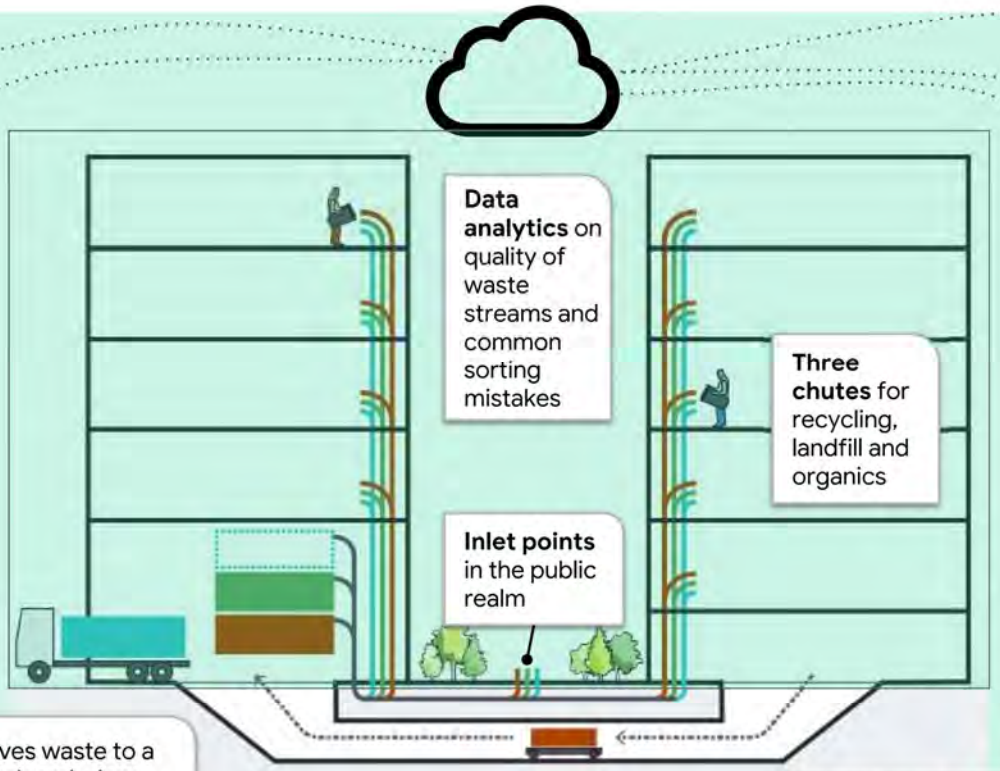


Strategy to Achieve 80% Diversion from Landfill

Waste characterization at Material Recovery Facility using computer vision

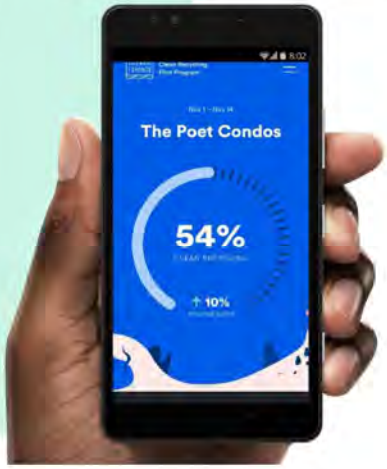


Pneumatic conveying system moves waste to a single pick up location, reducing truck emissions and the number of handoffs that can introduce contamination



Commodity brokers receive accurate information on waste contents to improve accuracy of valuation

User Interface for education on correct sorting and "pay-as-you-throw" waste charges



Volume & Weight sensors measure waste deposit by users

Thank You

Pages 356 to 373
are withheld
pursuant to paragraphs
20(1)(b), 20(1)(c) and 20(1)(d)
of the *Access to Information Act*

****

Les pages 356 à 373
font l'objet d'une exception totale
conformément aux dispositions des
paragraphes
20(1)(b), 20(1)(c) et 20(1)(d)
de la loi sur l'accès à l'information

Breakout 1

Quayside Site Plan & Transportation

52

Based on our projections and analysis, the proposed mobility system in Quayside will...

1. Serve most trips via non-auto modes, provided that implementation of streetcar service is accelerated for implementation by 2025
2. Encourage walking and cycling by providing a dense, speed-controlled network that focuses on comfort and access to bikes and transit
3. Handle an unprecedented number of curbside pick-up / drop-offs with fewer spaces
4. Provide alternatives to private automobile use in Quayside in order to facilitate a vibrant public realm

Transit

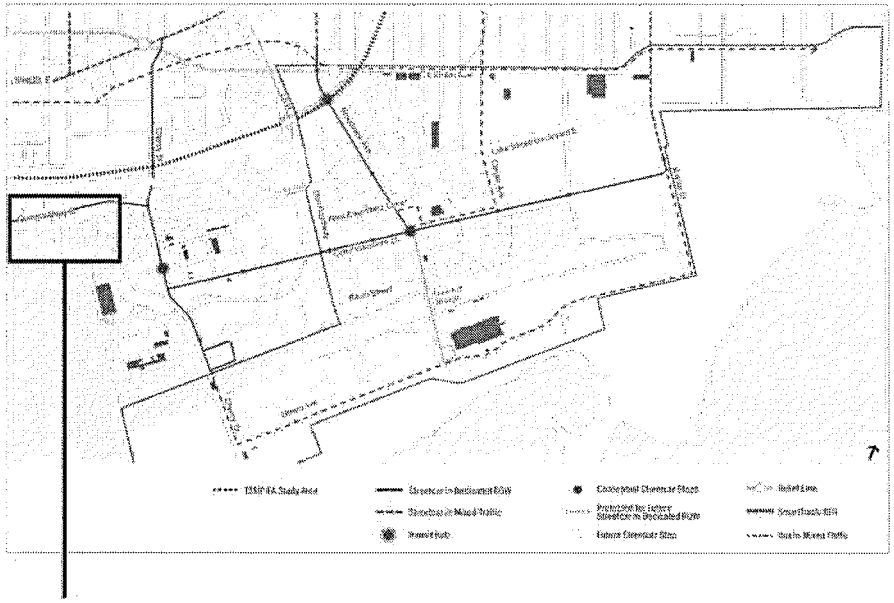
Eastern Waterfront LRT is already part of the City's approved transit plan and is essential to Quayside's success

In January 2018, City Council endorsed the Waterfront Transit Network Plan and directed staff to study options for the Union Station connection, targeted for completion in early 2019.

Sidewalk Labs agrees that this extension of the streetcar/LRT network is the best solution for connecting Quayside to the larger Toronto area.

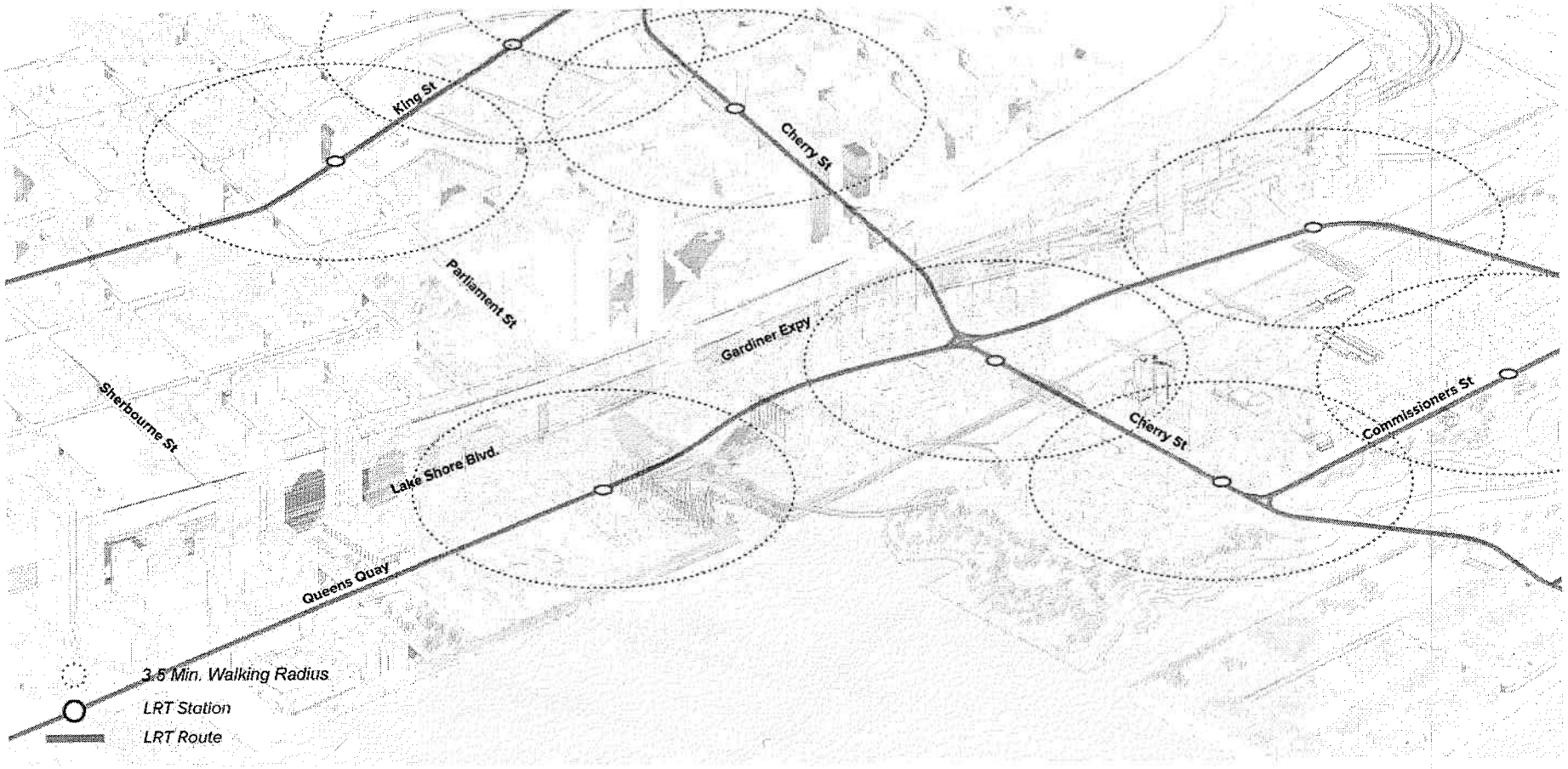
SIDEWALK LABS

Figure 7 – TSMP Transit Network

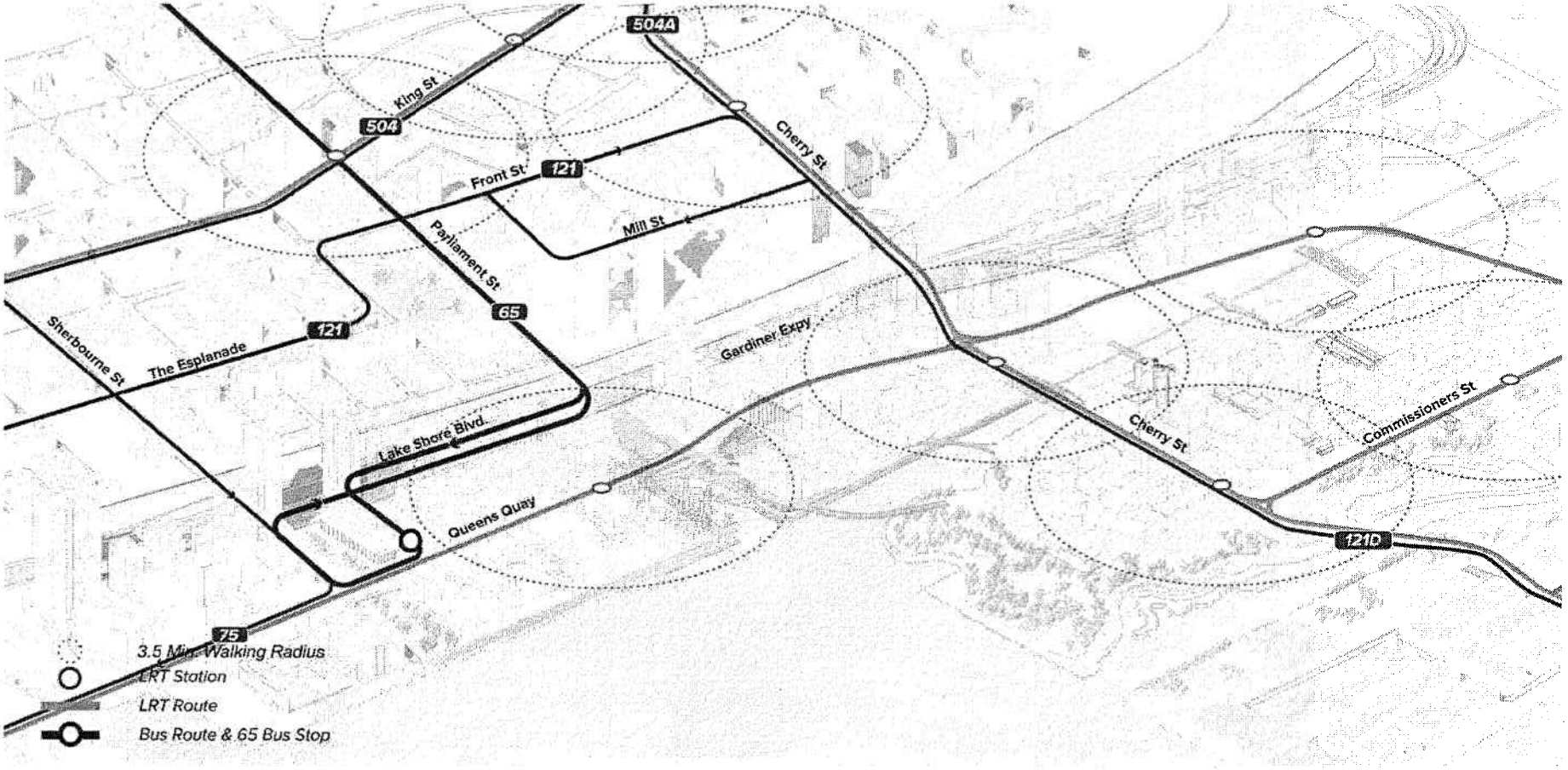


Quayside

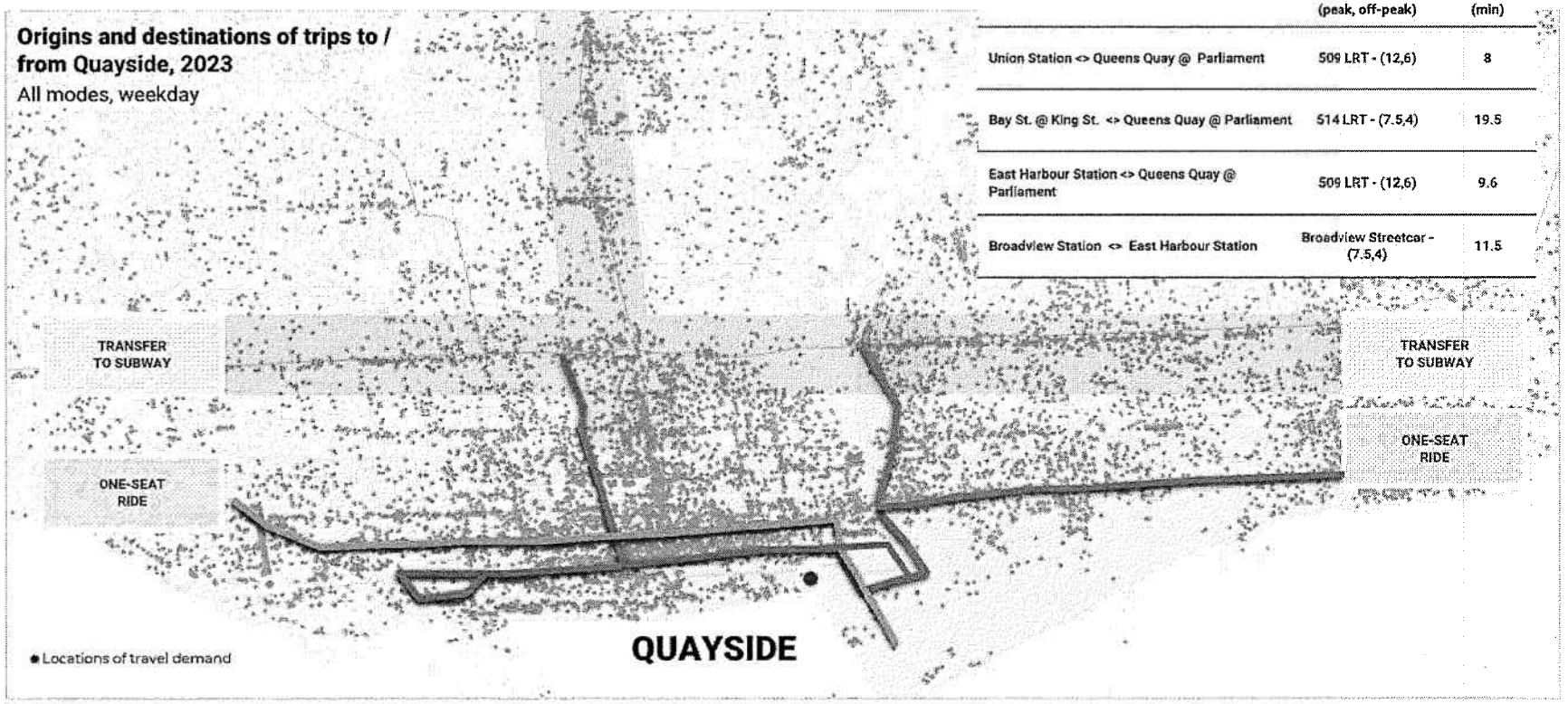
Light-Rail Transit



Bus Route


504A
King St
504
Front St
121
Cherry St
Mill St
Parliament St
65
Sherbourne St
The Esplanade
121
Gardiner Expy
Lake Shore Blvd.
Cherry St
Commissioners St
Queens Quay
1210
75
3.5 Min. Walking Radius
LRT Station
LRT Route
Bus Route & 65 Bus Stop

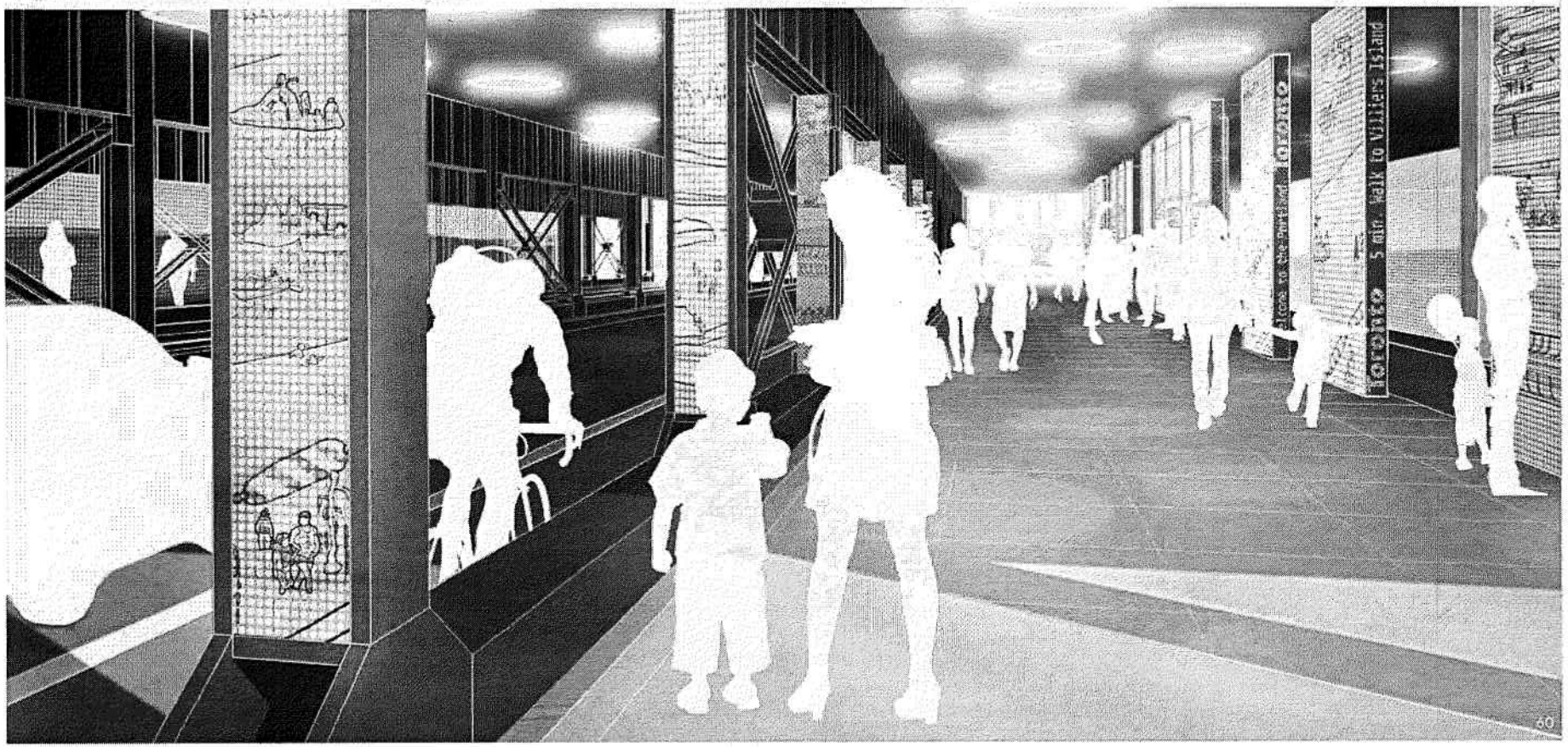
Streetcar extension will make a large number of destinations to / from Quayside accessible by transit



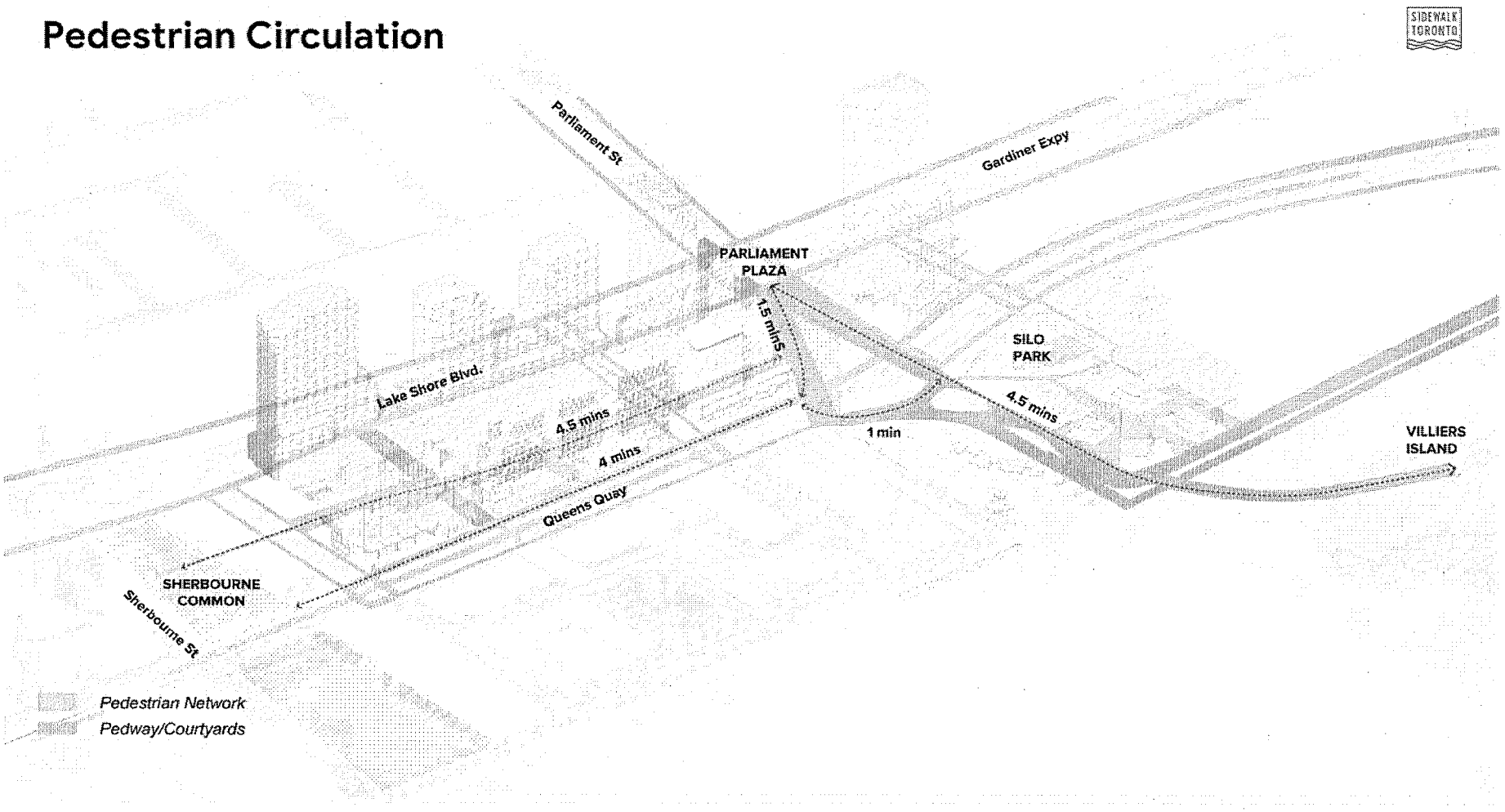
	Frequency In vehicle / hour (peak, off-peak)	Travel time (min)
Union Station <> Queens Quay @ Parliament	509 LRT - (12,6)	8
Bay St. @ King St. <> Queens Quay @ Parliament	514 LRT - (7.5,4)	19.5
East Harbour Station <> Queens Quay @ Parliament	509 LRT - (12,6)	9.6
Broadview Station <> East Harbour Station	Broadview Streetcar - (7.5,4)	11.5

Walking & Cycling

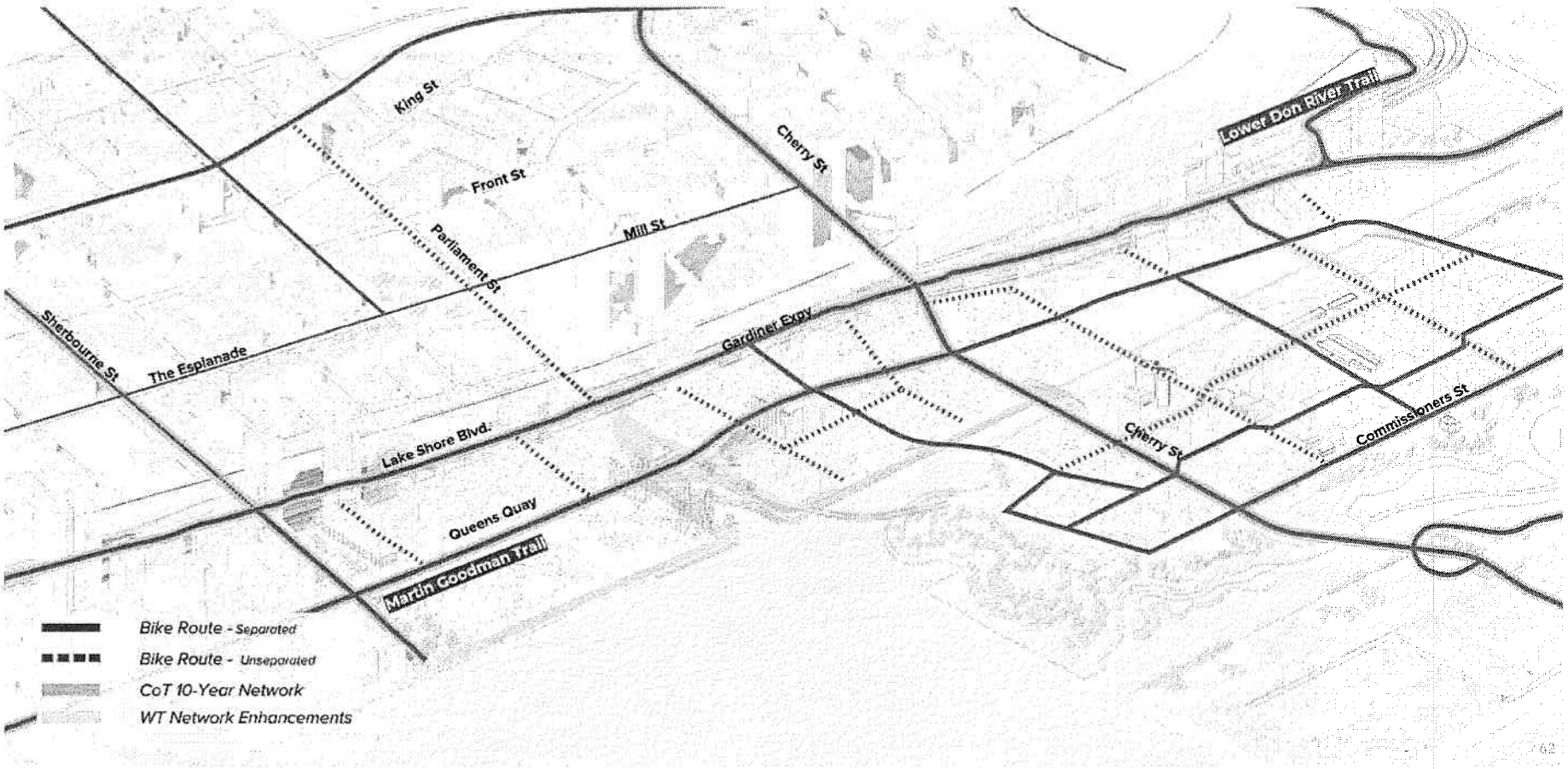
Parliament Plaza Begins with the Underpass

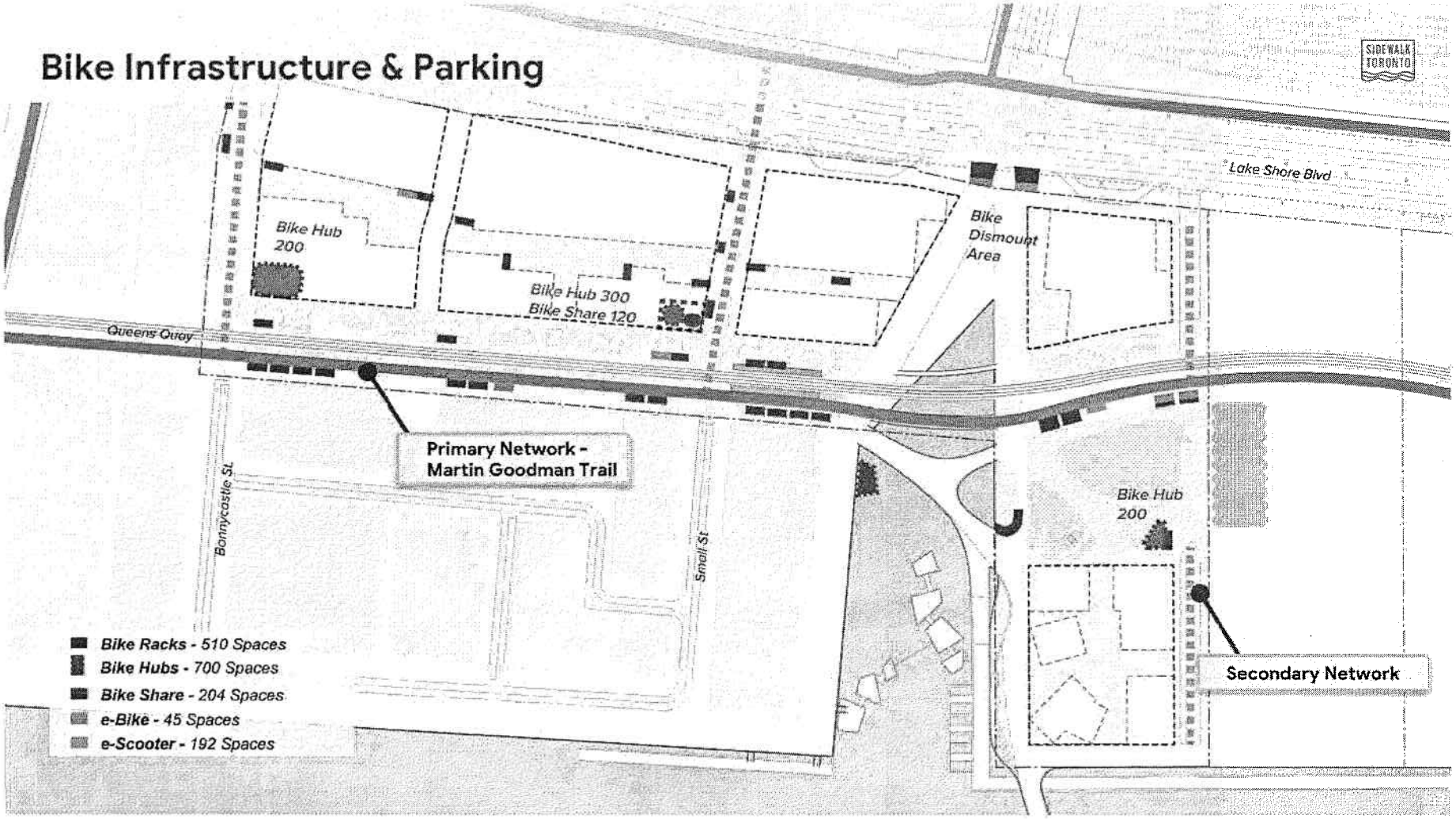


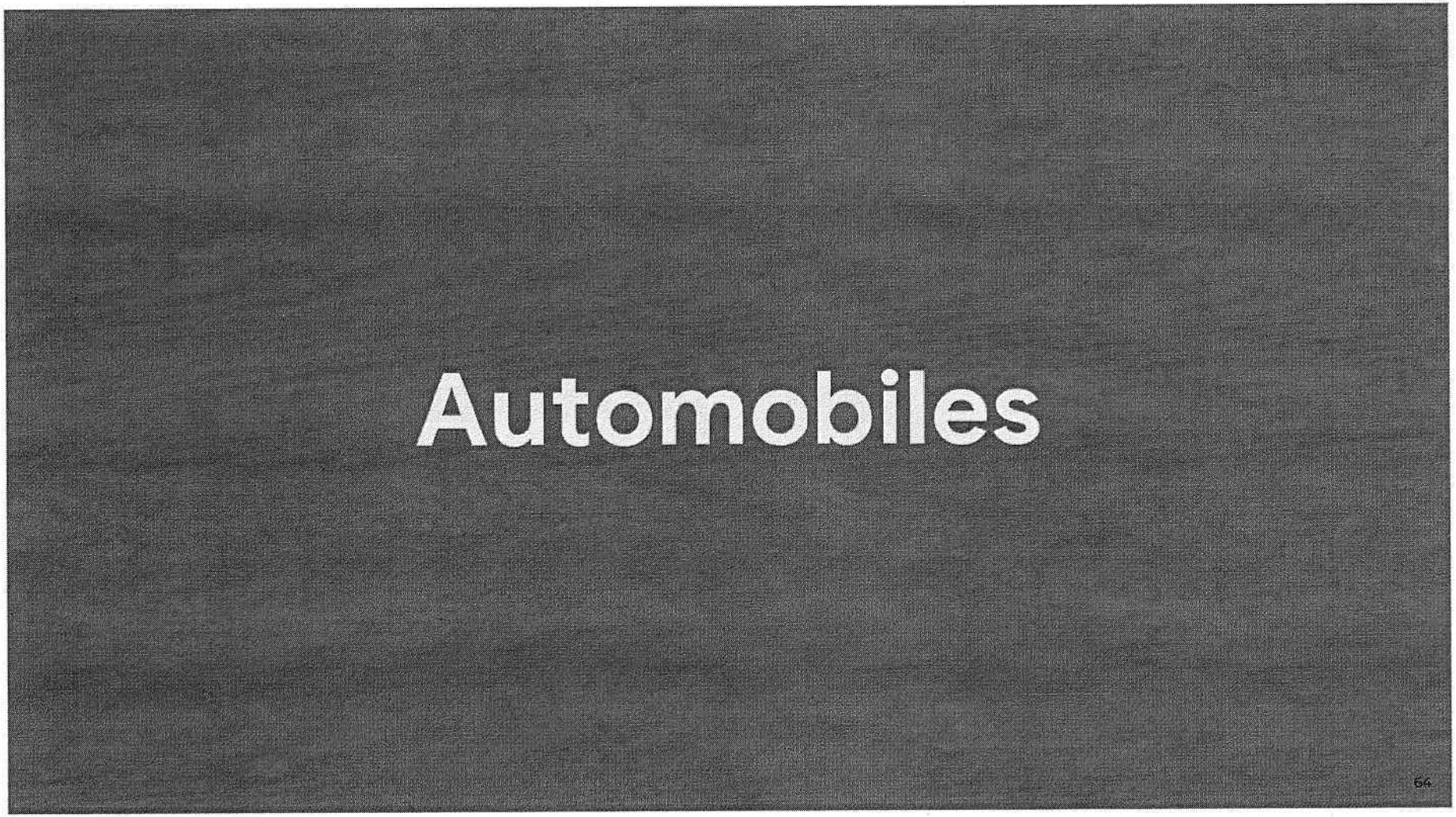
Pedestrian Circulation

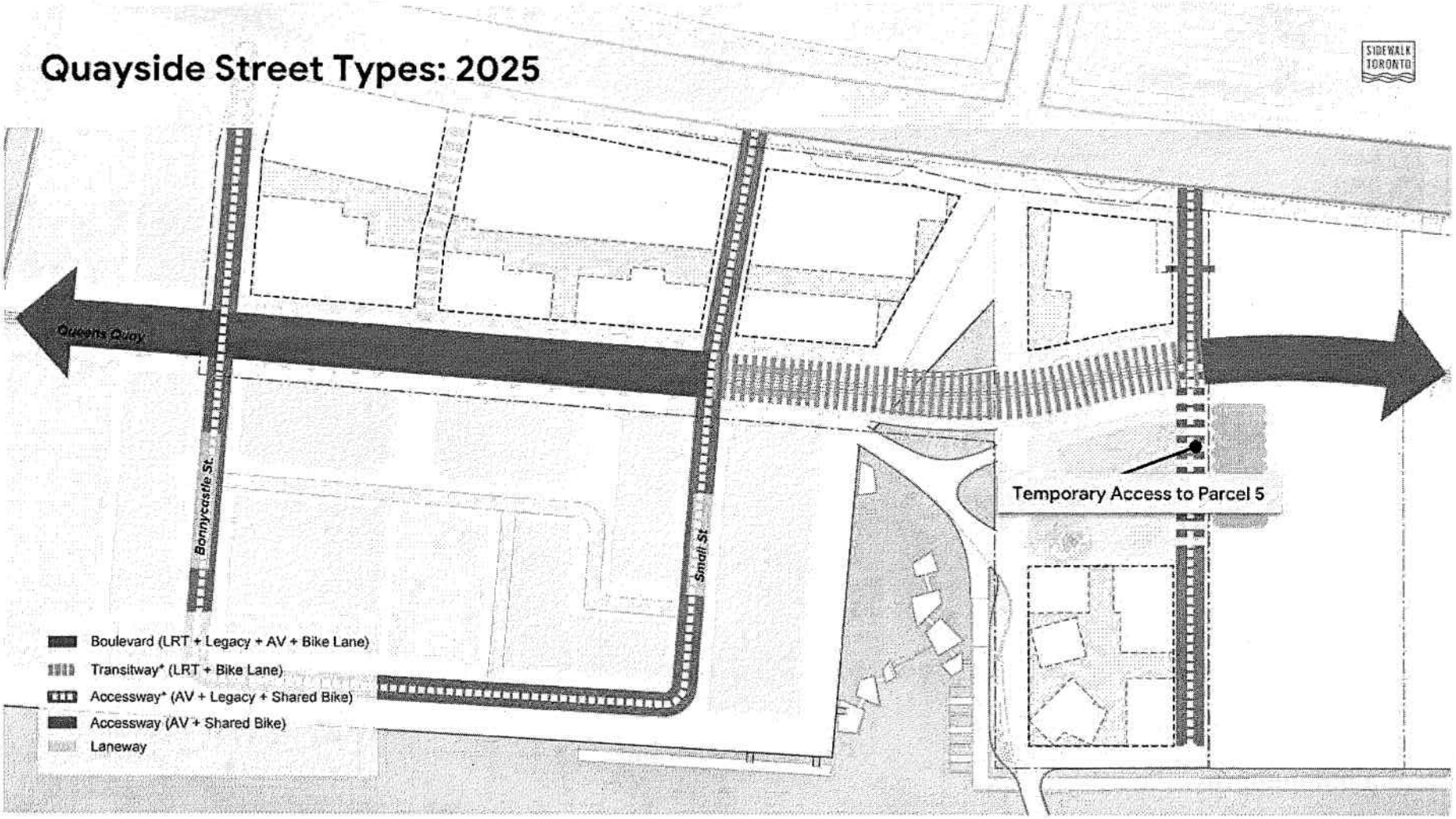


Bike Network

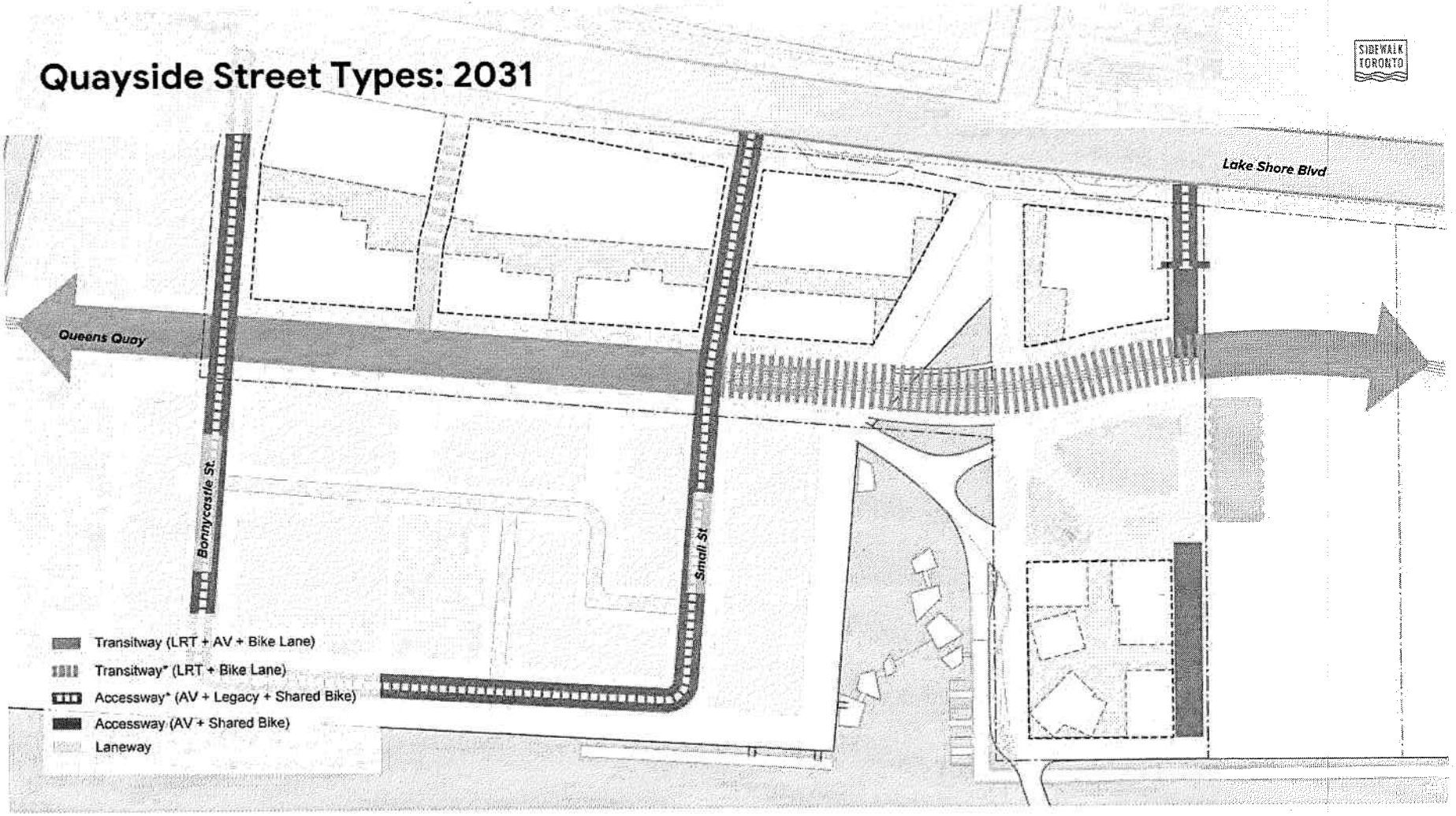



Bike Infrastructure & Parking
SIDEWALK TORONTO
Lake Shore Blvd
Bike Hub 200
Bike Hub 300
Bike Share 120
Bike Dismount Area
Queens Quay
Primary Network - Martin Goodman Trail
Bonnycastle St
Small St
Bike Hub 200
Secondary Network
Bike Racks - 510 Spaces
Bike Hubs - 700 Spaces
Bike Share - 204 Spaces
e-Bike - 45 Spaces
e-Scooter - 192 Spaces


Automobiles
64

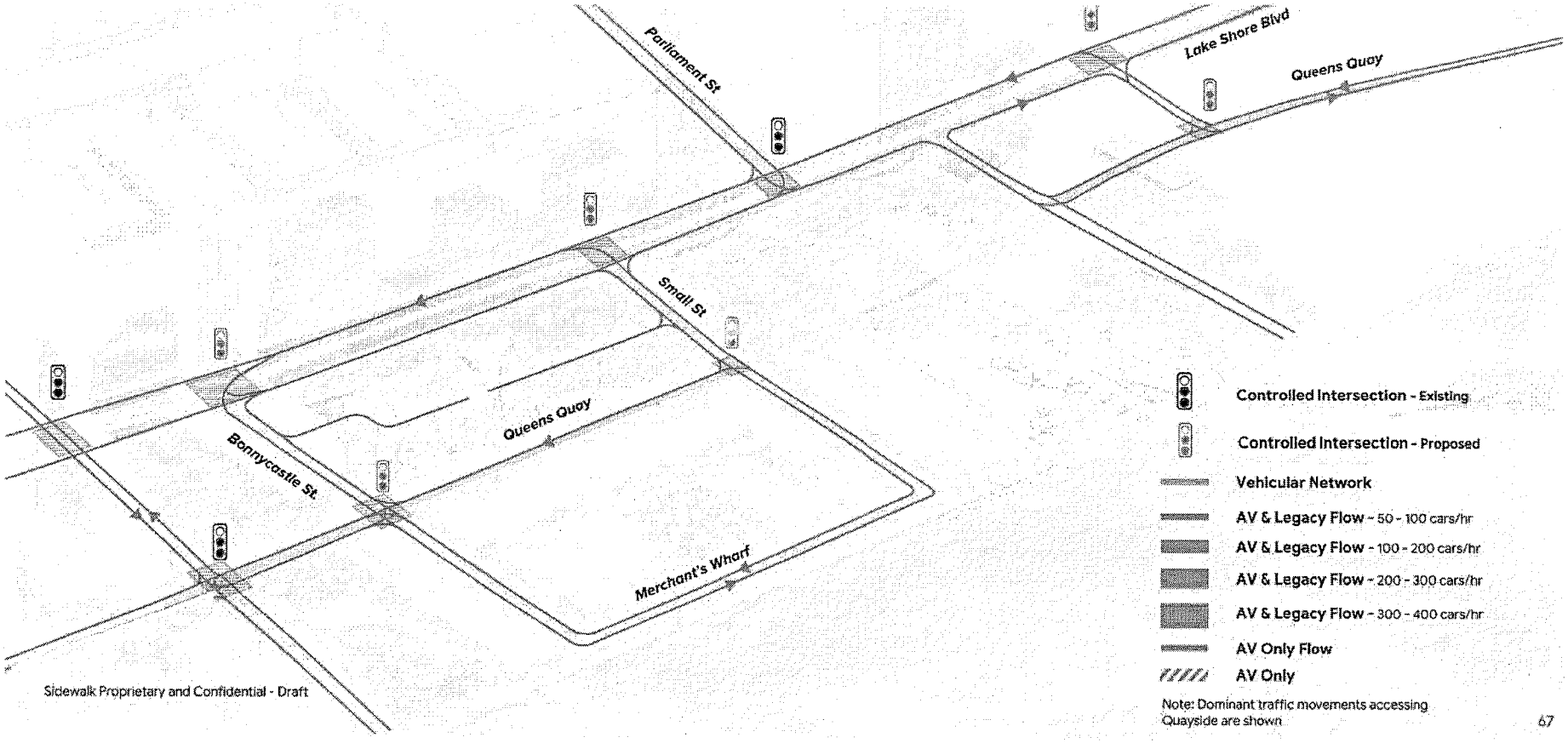

Quayside Street Types: 2025
SIDEWALK TORONTO
Queens Quay
Bonnycastle St.
Small St.
Temporary Access to Parcel 5
Boulevard (LRT + Legacy + AV + Bike Lane)
Transitway* (LRT + Bike Lane)
Accessway* (AV + Legacy + Shared Bike)
Accessway (AV + Shared Bike)
Laneway

Quayside Street Types: 2031



Vehicular Circulation: 2025

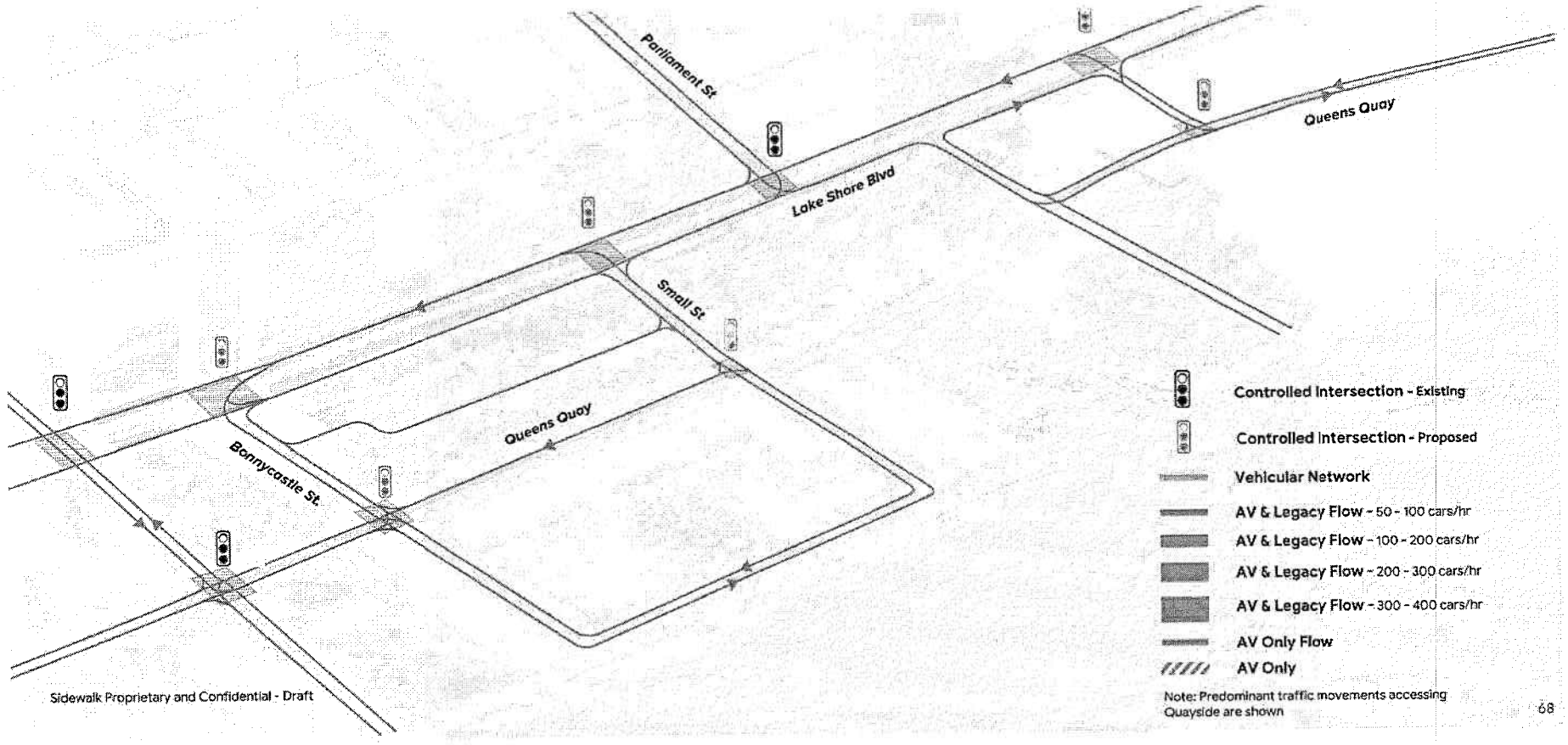
Eastbound Traffic



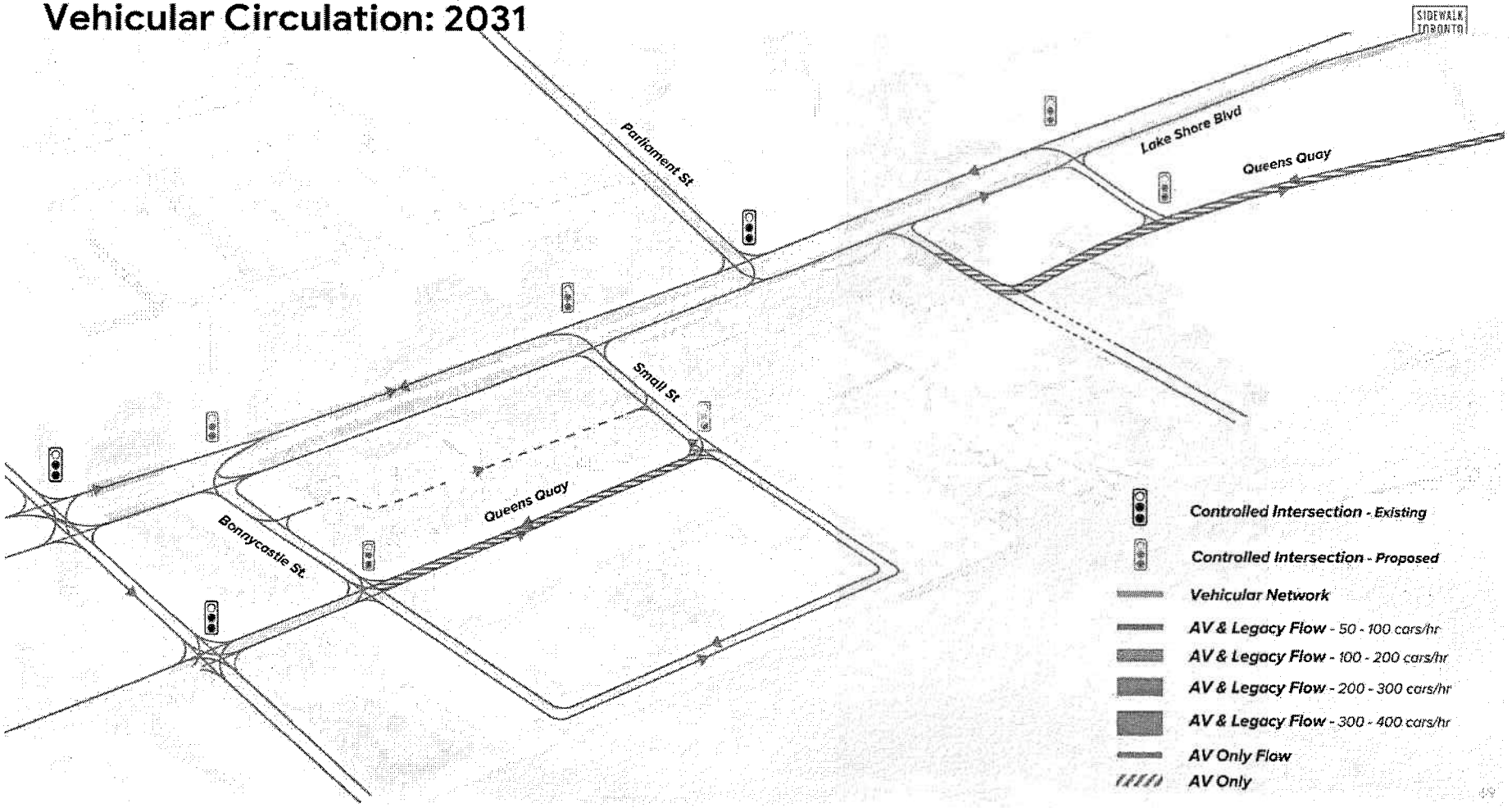
Sidewalk Proprietary and Confidential - Draft

Vehicular Circulation: 2025

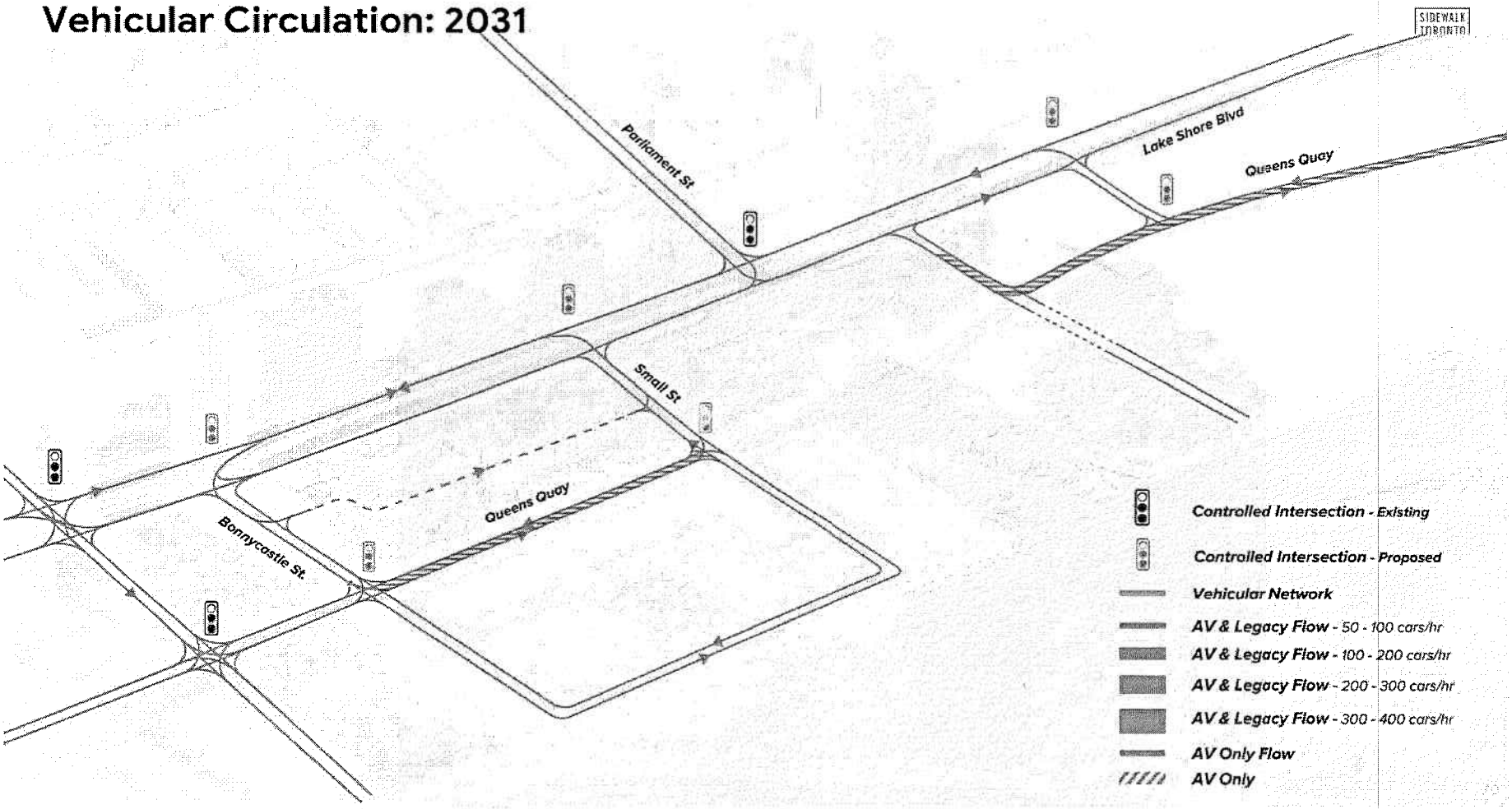
Southbound and Westbound Traffic



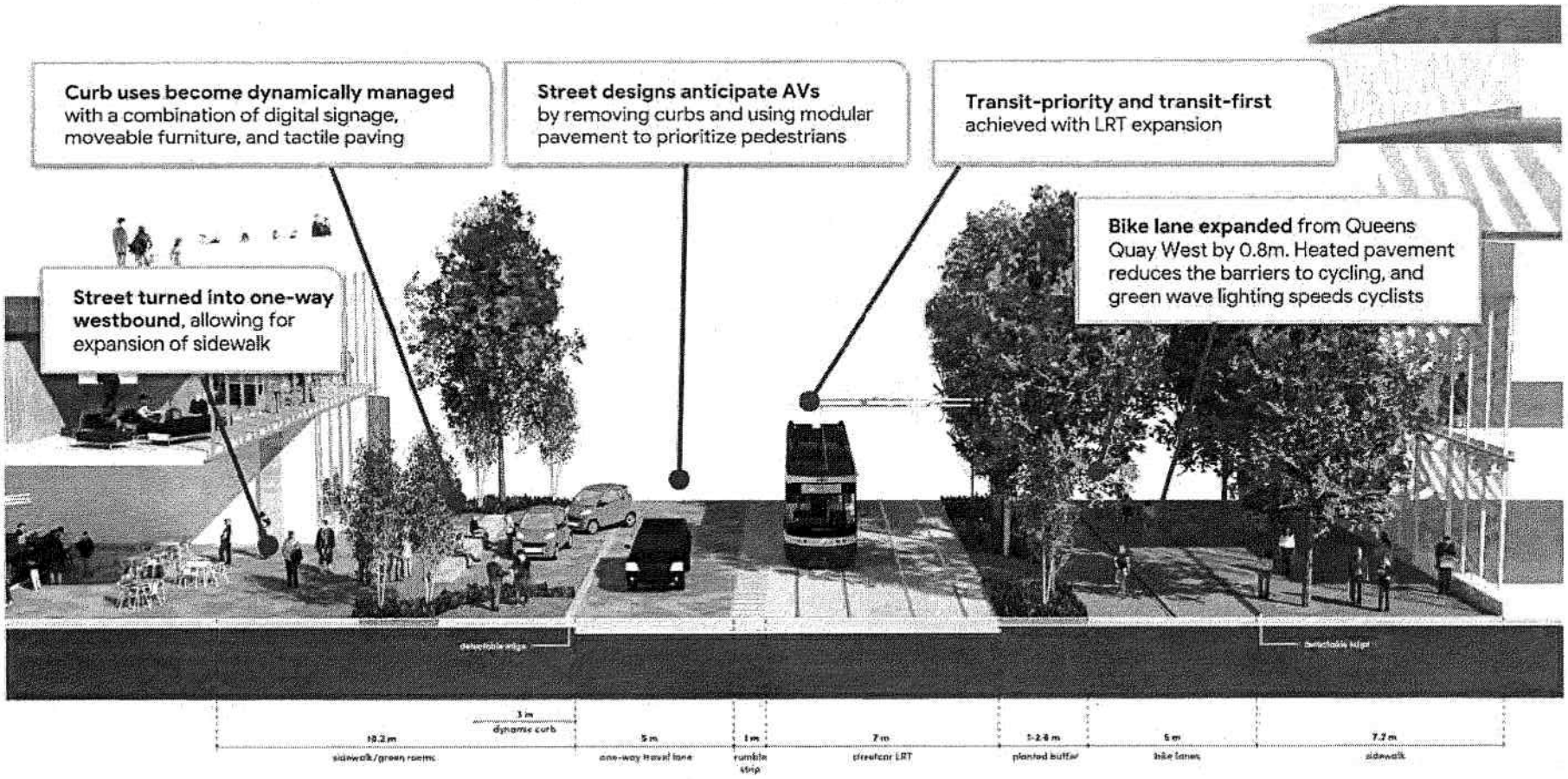
Vehicular Circulation: 2031



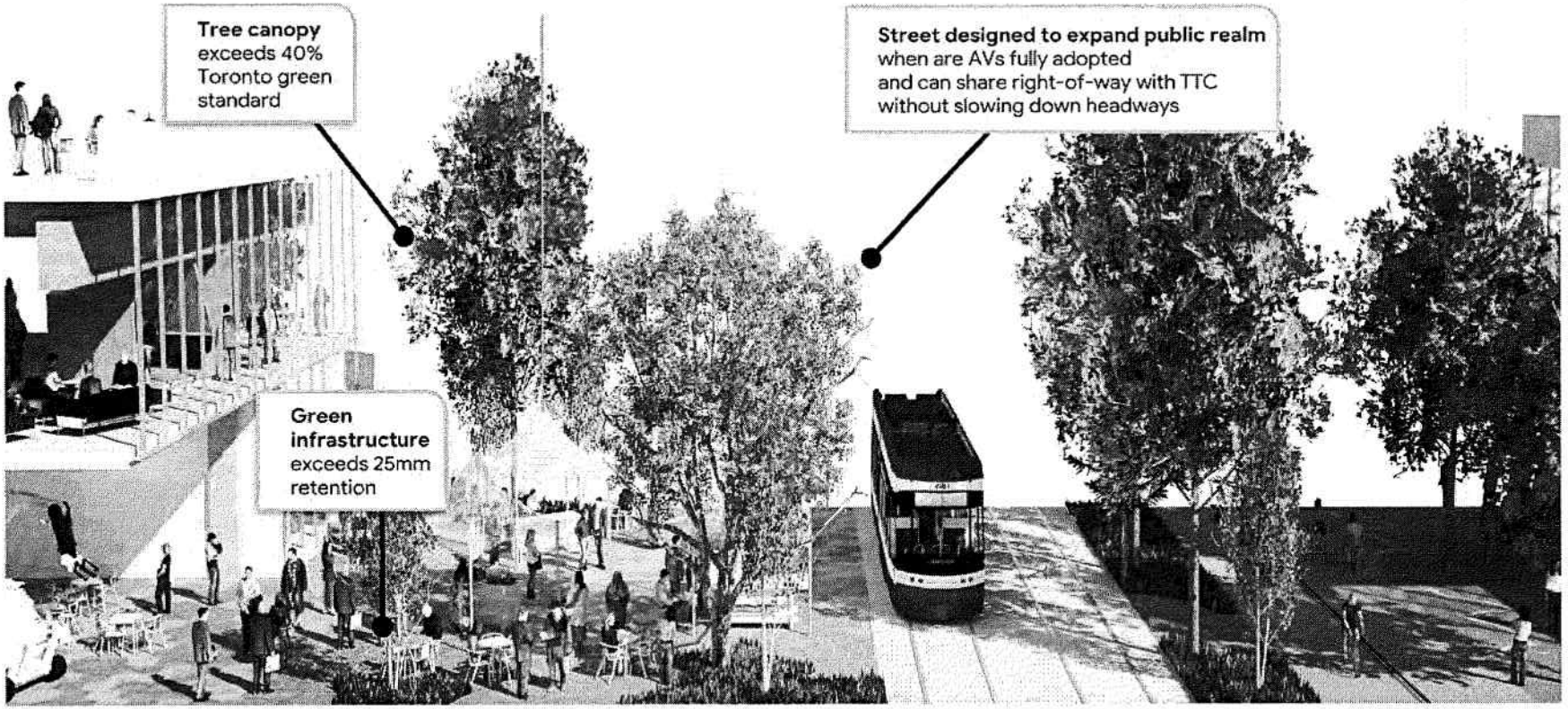
Vehicular Circulation: 2031



2025 Design: Queens Quay to Adapt for Future as One-Way Pilot



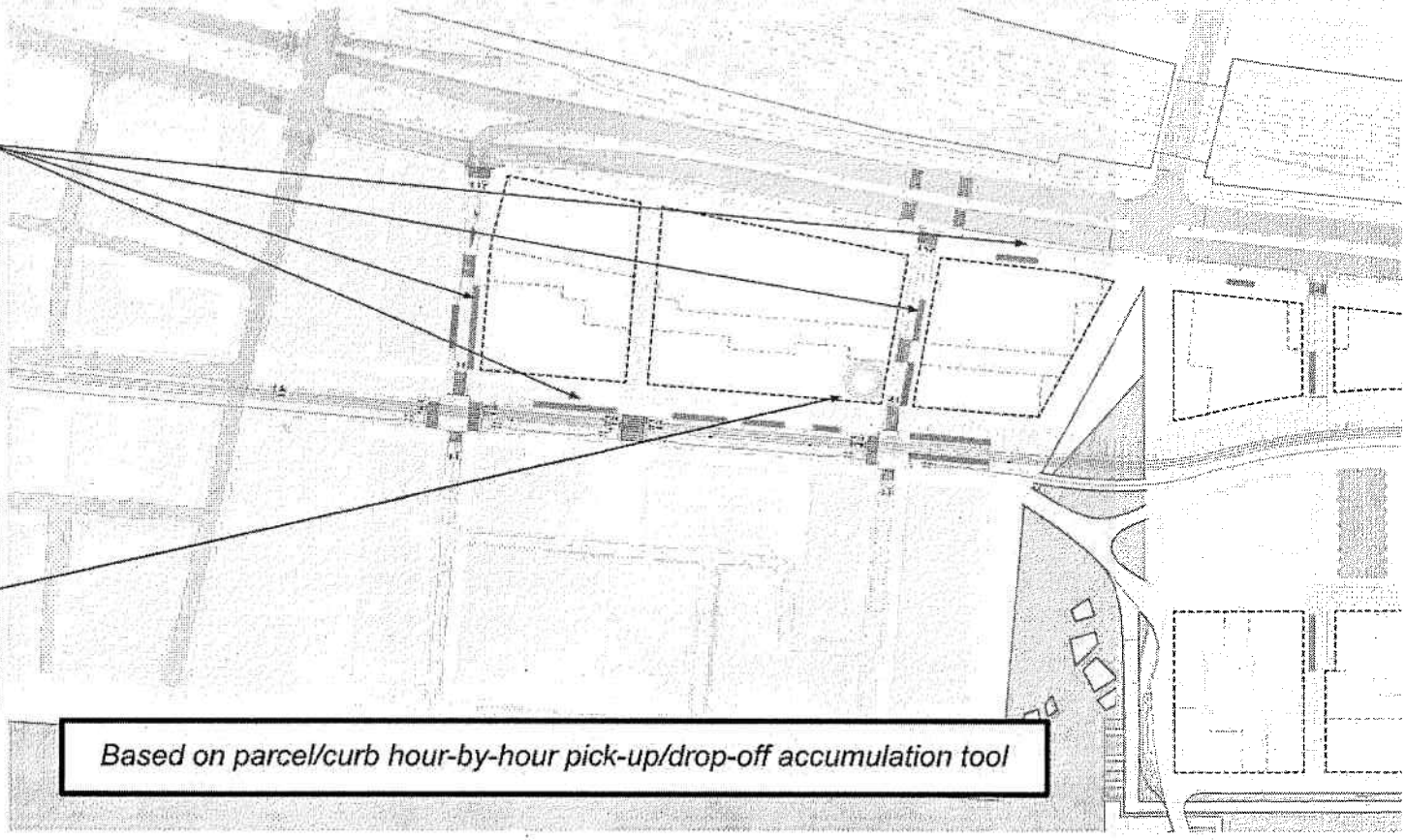
2031 Design: Queens Quay to Become Transitway with Full AV Adoption



Permit pick-up and drop-offs at an interchange facility, and at dynamically-managed curbside spaces

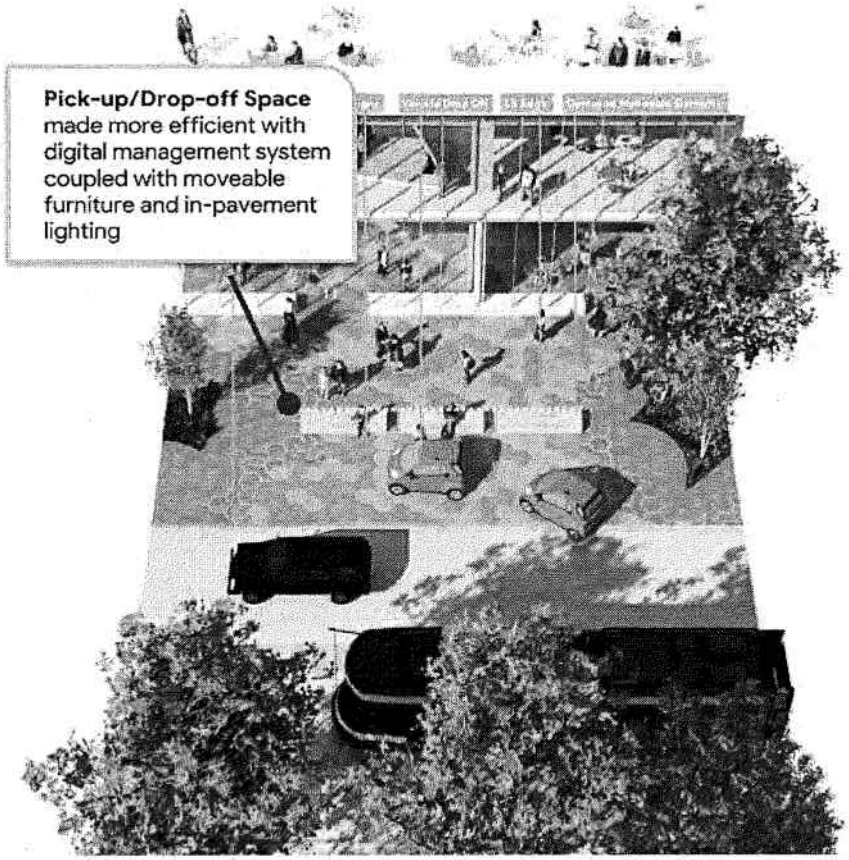
598 pick-up/drop offs at the peak hour will occur on-street at 34 dynamically managed curbside spaces

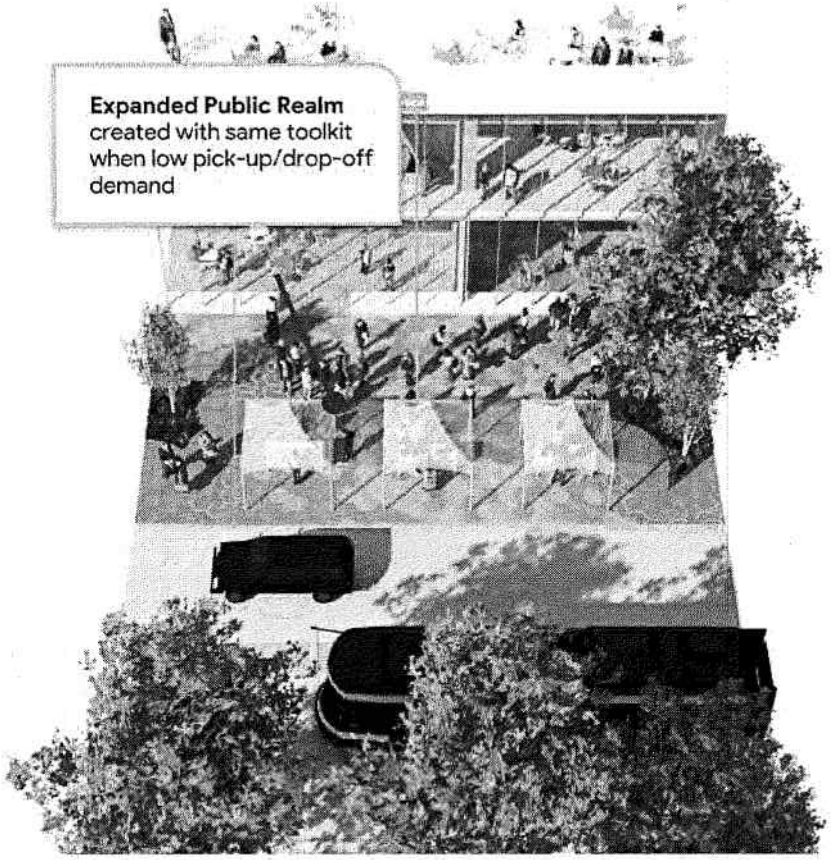
377 pick-up/ drop-offs at the peak hour will occur at a multi-modal interchange facility



Based on parcel/curb hour-by-hour pick-up/drop-off accumulation tool

Queens Quay Dynamic Curb

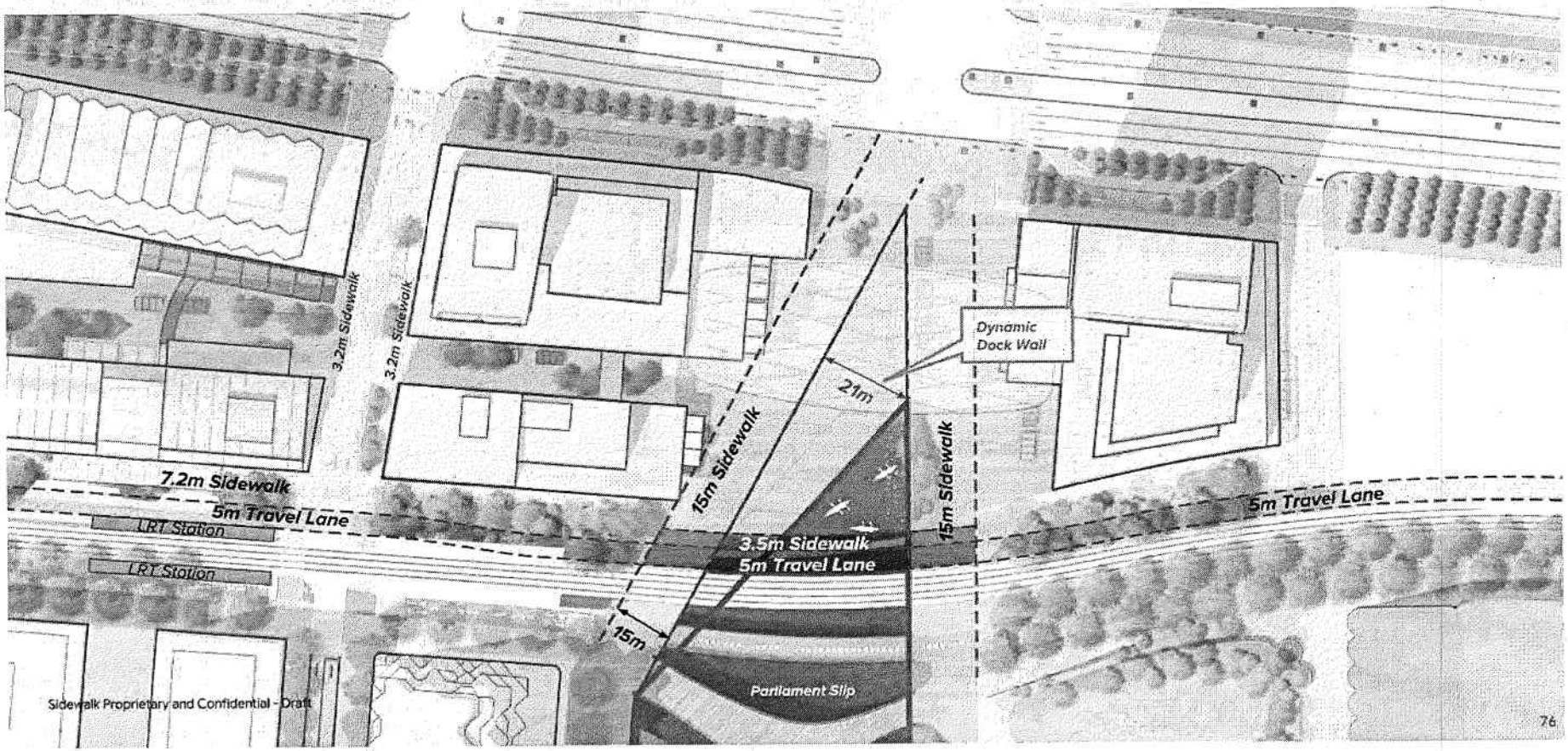




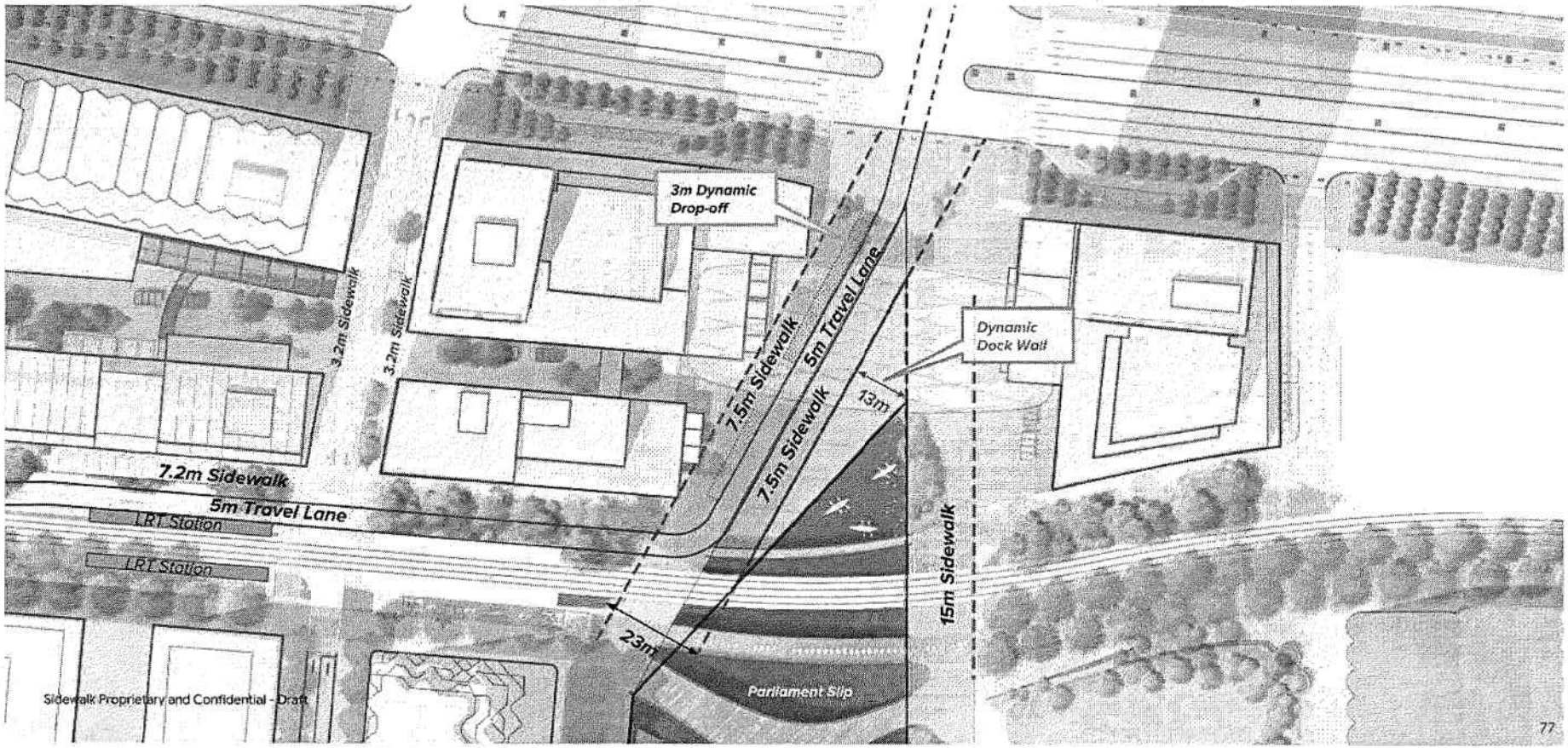
Parliament Gateway Explorations

This section being updated based on City feedback. The approach will be to show multiple options for transportation and public realm in Quayside similar to how we showed multiple options for Queens Quay in RT3

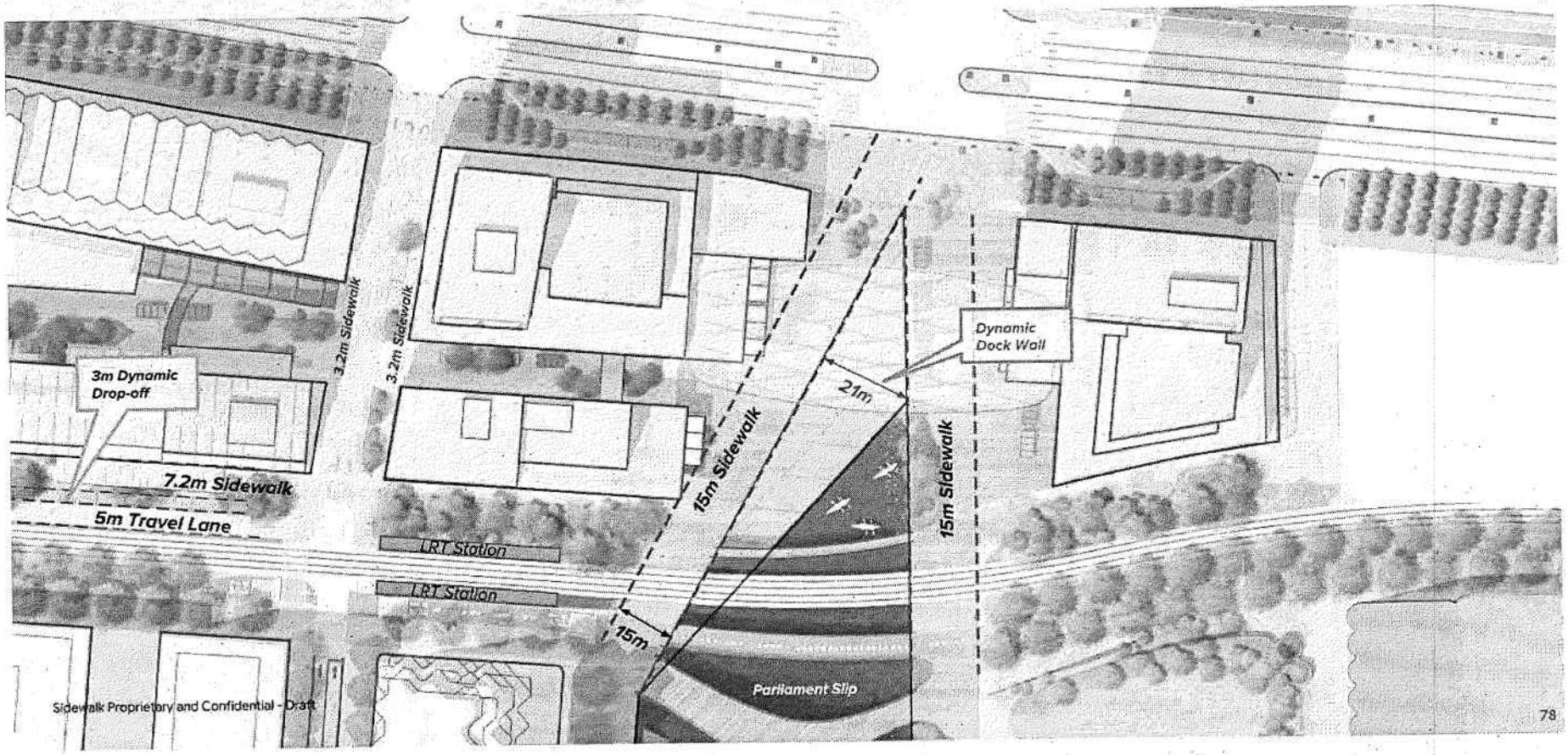
E-W Connection (One-way through Queens Quay from Cherry to Bonnycastle)



N-S Connection (One-way w/ N-S connection through Parliament)



Transit, Bikes and Peds-only in Plaza

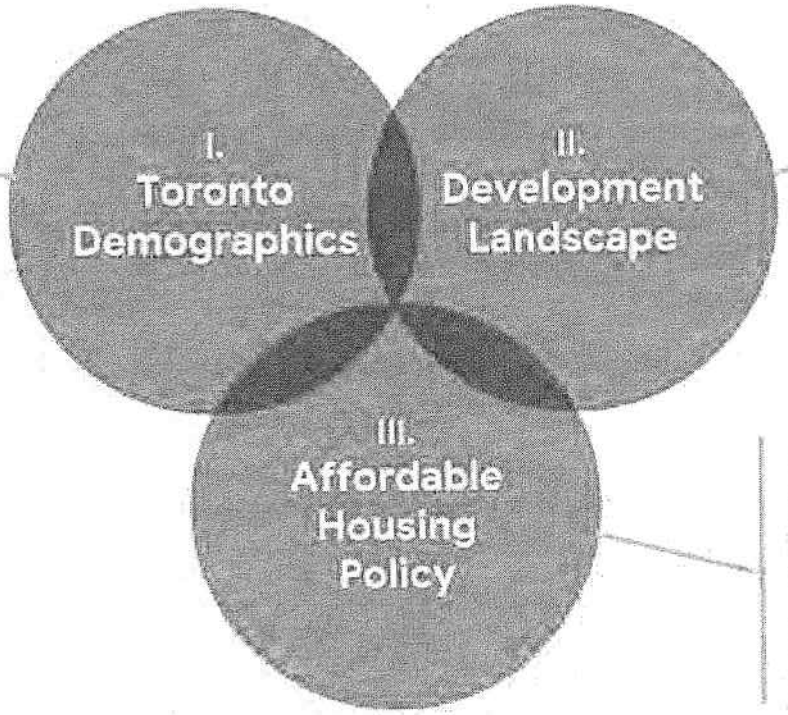



SIDEWALK TORONTO
Breakout 2a
Housing Affordability
79

Toronto is in housing gridlock

Record Growth
Toronto is projected to grow by 1 million people by 2041

More Singles, Seniors, Multi-generational
Single-person households now #1 type in Canada



Soaring Prices
Average home 9X median household income in Toronto

Record-low Vacancy
1% vacancy rate, below Montreal, NYC, Chicago, LA

Condos and Investors
76K condos built in last decade, compared to only ~2K rental units

Affordability Out of Reach
No mid-range programs to increase affordability for middle-class families

Historical Defunding
Lack of existing programs and partnerships to address affordability needs for households of all incomes

Sidewalk Toronto (SWT) objectives and guiding principles

Mixed-Income, Diverse	Commit to creating a mixed-income, diverse community
Scalable, Sustainable Test Bed	Serve as a global test bed to incubate scalable, sustainable change for housing affordability
New Options	Believe affordability also means meaningfully increasing choice in housing decisions for Torontonians
Specific to Toronto	Will respond specifically to unique Toronto market conditions
Not End-All Solution	Cannot single-handedly solve the local housing crisis, but can contribute to the creation of new solutions
Public & Non-Profit Partnership	Will partner with existing housing sector stakeholders, including all levels of government

SWT will create more affordable & middle-income housing

What We Propose

20% affordable housing, including 5% deep affordability

Up to 20% middle-income housing, including up to 15% mid-range affordable rental for households at 100-150% AMR

Mixed-income community

Why It Is Important

Three Cities Within Toronto (Hulchanski)
Updated 2015



SWT will create more purpose-built rental housing

Why This Is Important

8,000 Estimated new purpose-built rentals needed each year until 2041 to close the gap

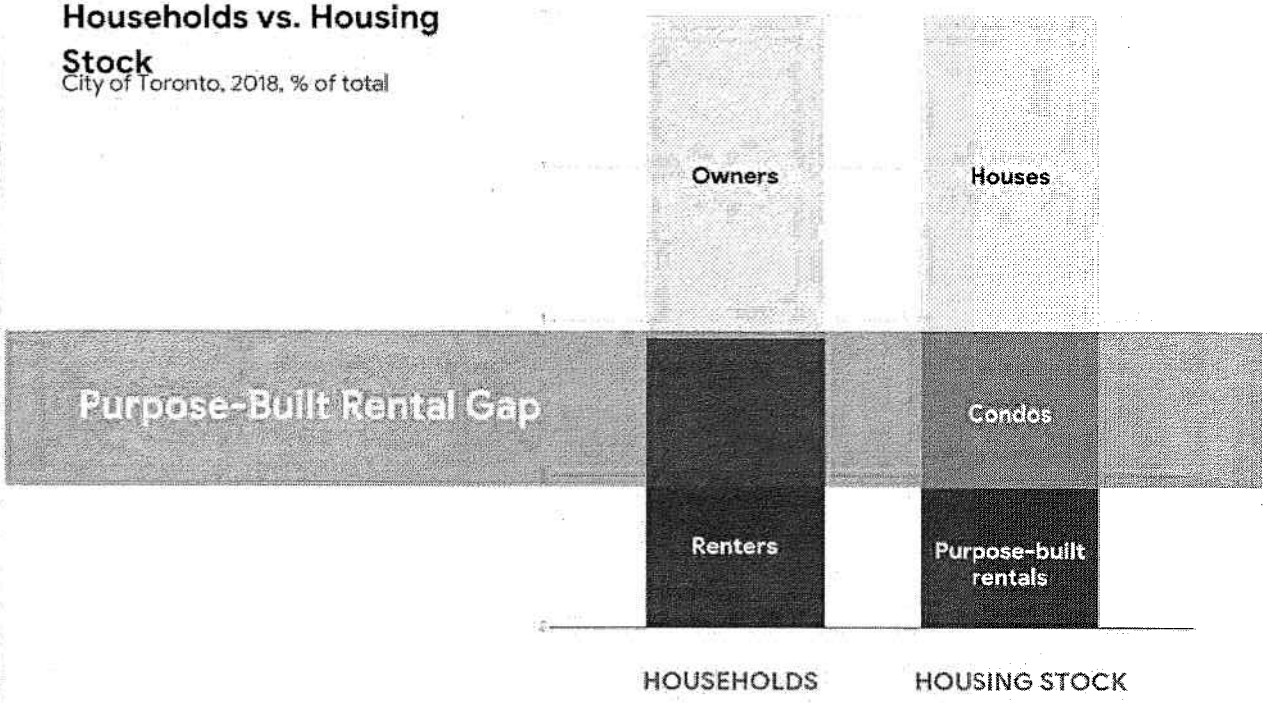
23% Only 23% of household stock is purpose-built rental, compared to 50% renters

3X Renters 3X more likely today to be in unsuitable housing than owners

10 yrs Estimated required time for middle-income households to afford homeownership

Households vs. Housing Stock

City of Toronto, 2018, % of total



SWT will deliver more housing options (families, singles, & seniors)

What We Propose

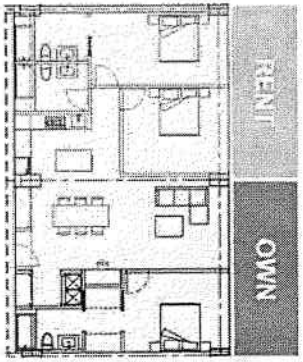
Estimated 5% new shared equity option as an affordable homeownership approach

Targeting 40% family housing, of 2+BR units or more

Estimated 5% co-living housing as part of Quayside

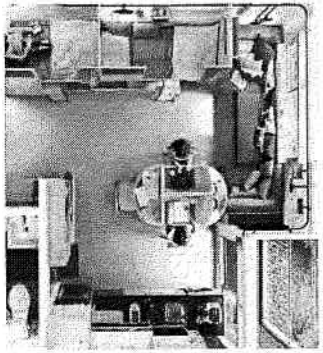
What It Looks Like

SHARED EQUITY



New tenure model between renting and owning that increases suitability for families unable to reach traditional ownership

FAMILY UNITS



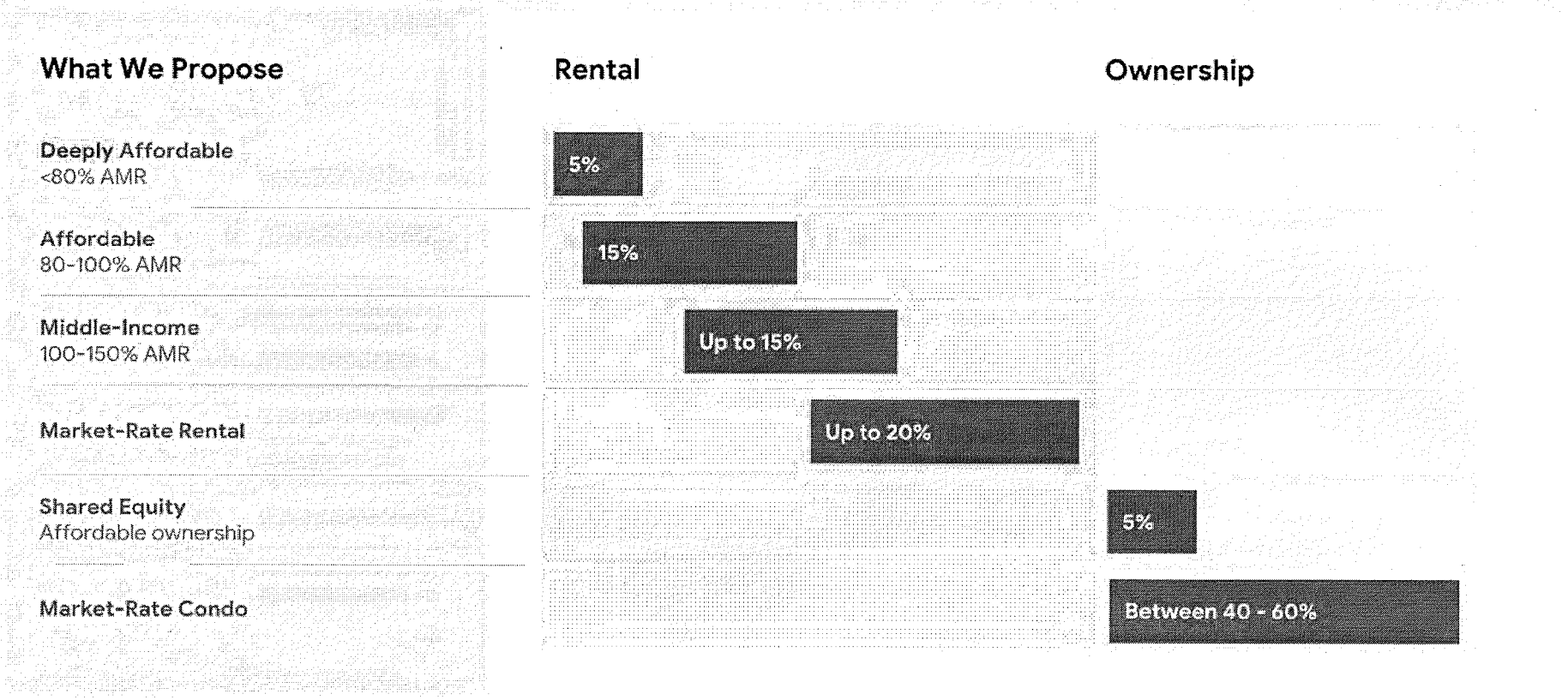
Larger units with at least 2+ bedrooms to fit growing families in Toronto

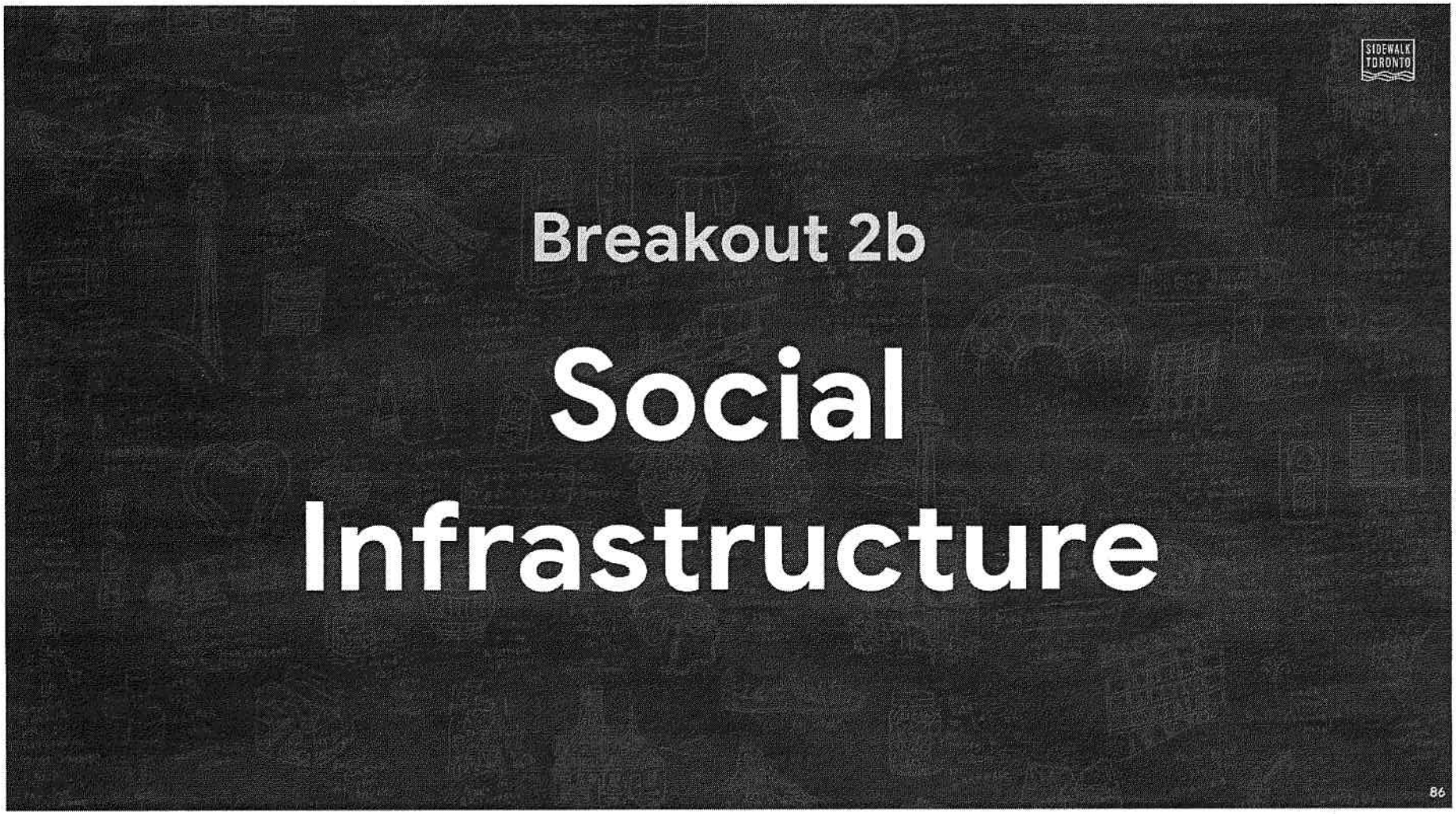
CO-LIVING



Communal housing type that pairs shared amenities with efficient units to enhance community for singles, seniors, and families

Quayside Housing Plan [November 2018 DRAFT]

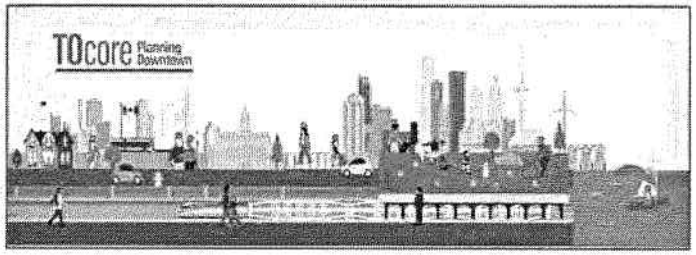



SIDEWALK TORONTO
Breakout 2b
Social Infrastructure
86

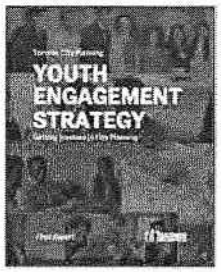
Supporting People to Thrive in Their Everyday Lives

Sidewalk Toronto aspires to be a healthy urban community where all people can thrive and belong throughout their lives.

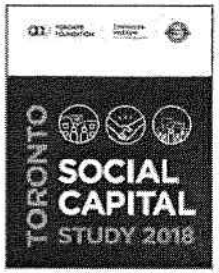
Social infrastructure is key to this vision.



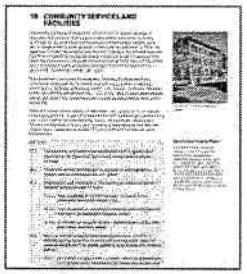
Vital Signs (Toronto Foundation)



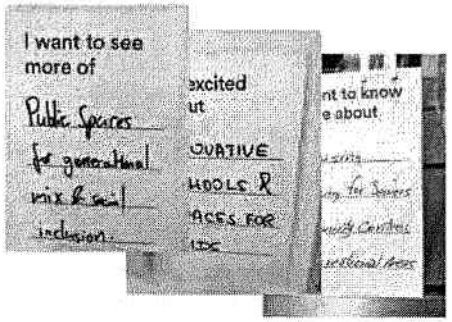
TOCore Community Services & Facilities Plan

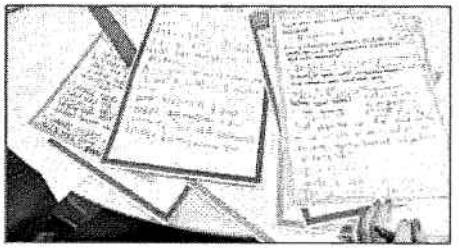


City's Youth Engagement Strategy



City's Seniors Strategy



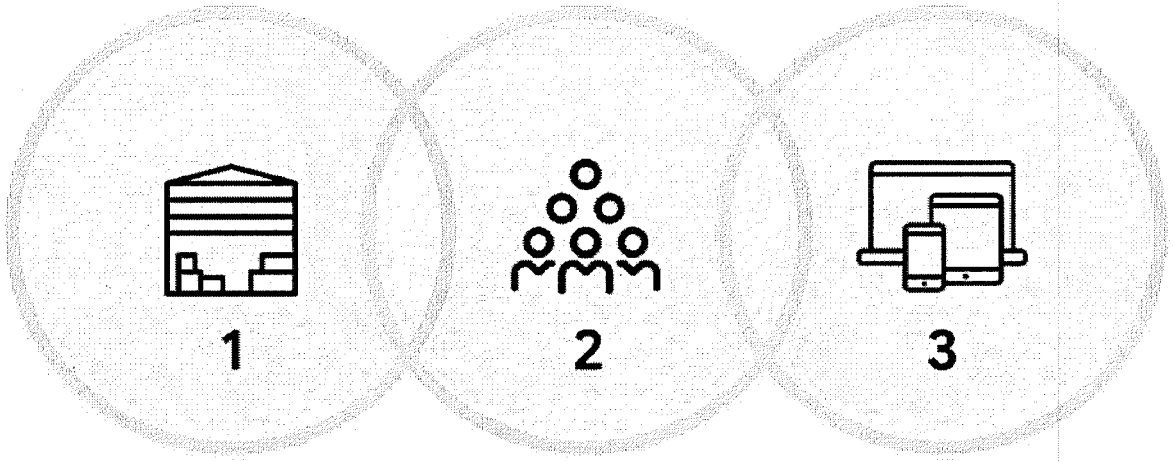


Toronto Community Feedback

Photos of feedback cards on the wall at 307

Intentional and Proactive Social Infrastructure Planning

Social infrastructure is comprised of the the physical spaces, programming & services and digital complements that shape our interactions, organize our community, and provide the supports necessary to thrive.

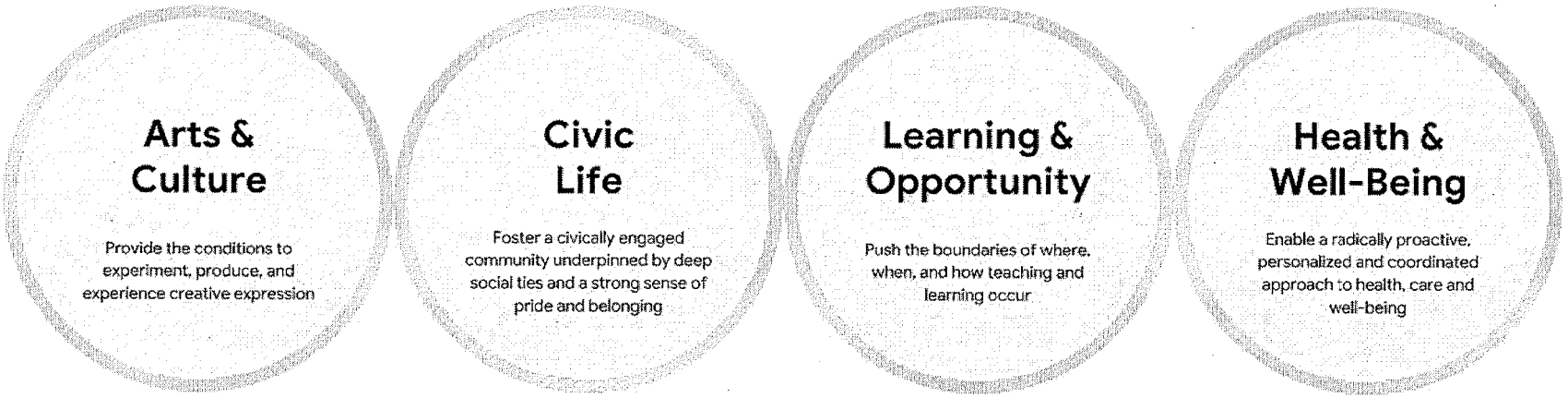


Physical Spaces

Intentional Programming & Service Delivery Partnerships

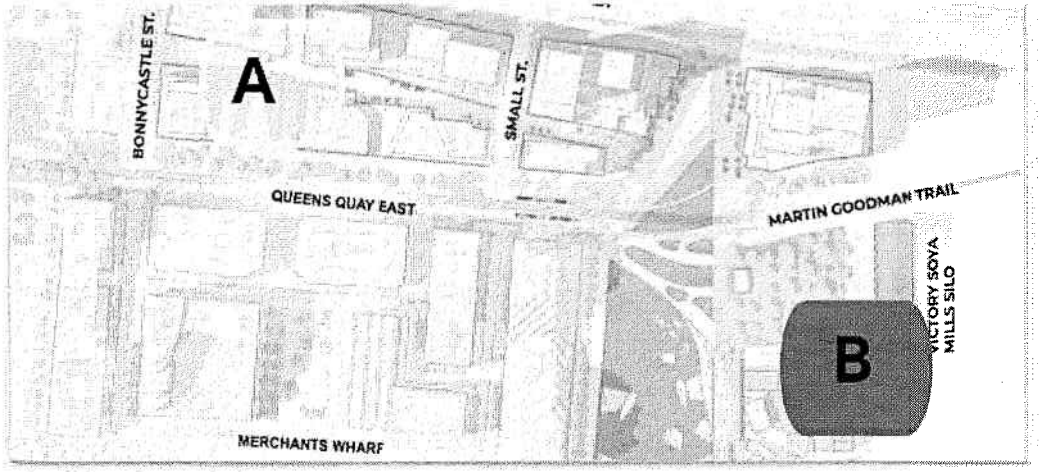
Digital Complements

Supporting Holistic Community Well-Being



1
Bringing Together Diverse Spaces and Services

Strong and sustainable social infrastructure is fundamental to the future of urban life.





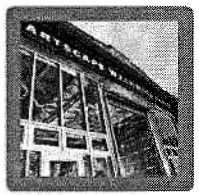
A Care Collective



A Community Culture



A Civic Assembly



B The Opportunity Hub

1
Future of community spaces

QUESTIONS

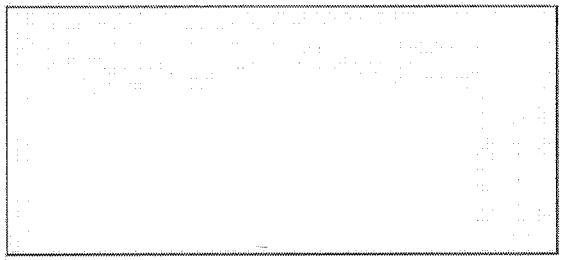
How do you help communities to stay healthy?

What current & future trends might influence the way we think about community health & well-being?

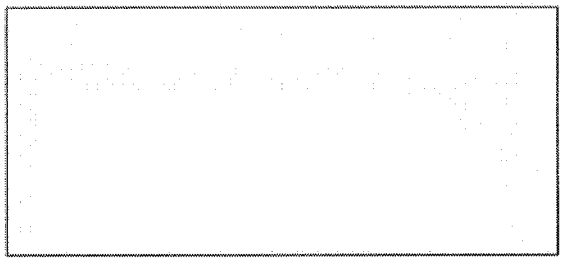
How do Torontonians think about caring for themselves and others?

What kinds of community spaces might enable the future we desire?

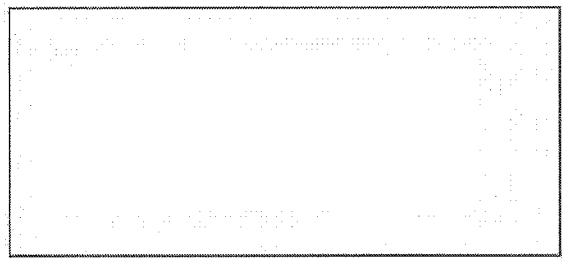
Worked with local consultancy, Idea Couture, and members of the community to build a perspective on the future of community-based health and well-being and to develop a concept for a community space dedicated to heath & well-being:



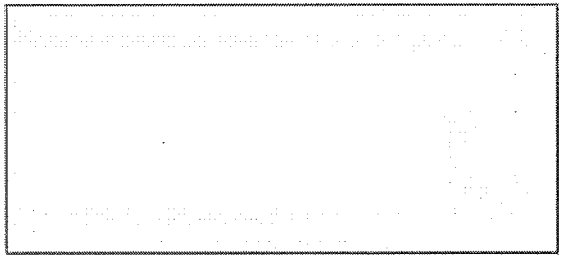
Conducted baseline research and future-looking horizon scan identifying 7 drivers and more than 140 signals of change



Conducted 20 interviews and ethnographic "immersions" with residents and service providers from across the city



Developed 90+ ideas with over 20 community partners at a day-long co-creation session



Imagined 6 future community spaces

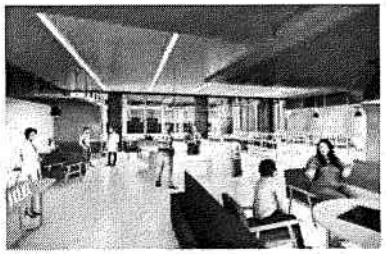
1
Quayside Care Collective

Exploring community based approaches to enhancing health, care + community connection.

LIVING WELL ON THE WATERFRONT



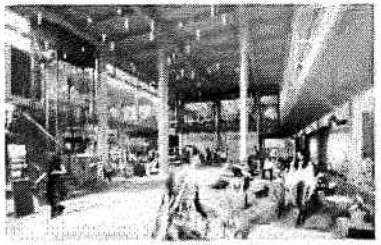
Health service delivery spaces: face to face & digital



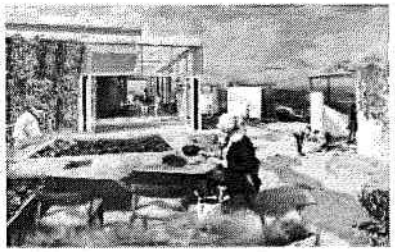
Resource & learning library; digital health devices & interpreters



Traditional pharmacy + learning space + healthy living retail / cafe



Community living room: common space for gathering and pop-up services



Sanctuary spaces to disconnect, reflect and connect with nature



Prototyping space to connect innovators with visitors

2 Intentional Programming & Service Delivery Partnerships

Exploring community based approaches to enhancing health, care + community connection.

KEY PARTNERSHIPS

Sidewalk Labs does not intend to deliver core services in Quayside (health & human services, education, etc.)

Partnerships are key to our vision and we are working closely with local organizations to:

- Understand the local context
- Plan proactively and allocate space for service delivery
- Co-develop innovative approaches to service delivery

HEALTH & WELL-BEING

Idea Couture - Community hubs of the future concept development

St. Elizabeth Health Care - Housing and service concepts for seniors

Non-profit/Government/Hospital - Health and community service planning and delivery

Environmental health research partnerships

LEARNING & CAREER OPPORTUNITIES

School board collaboration for primary school

Toronto Public Library collaboration for community programming

Maximum City partnership for secondary school educational programming

Sidewalk Works program creation for future skills development

CIVIC LIFE & ENGAGEMENT

Code for Canada partnership for inclusive usability testing group (GRIT)

Digital Public Square partnership to catalyze a Neighbourhood Association and build out civic digital tools

ARTS & CULTURE

Participatory Public Culture Curatorial and Artistic Residencies at 307

Commissions with ArtSpin and the Toronto Ink Company

Public workshops with ArtScape + Indigenous Design Community

Collaboration with Toronto Public Library

PARTNERSHIP

Sidewalk Toronto and the Toronto Public Library are collaborating around shared vision and values, including:

- Serving a diverse population;
- Putting community needs at the forefront of planning; and
- Testing sustainable approaches with potential to scale

Sidewalk Toronto will work closely with local organizations to bring a range of programs and services to Quayside

COLLABORATION GOALS

- Promote **alignment and integration of services** between SWT's social infrastructure plans and TPL's new branch on the First Parliament site
- Explore **pilot opportunities**, while collaboratively developing long-term vision:
  - **TPL "pop-up" locations** in Quayside's ground floor areas
  - **Improved user experience for booking public spaces** for community uses
  - **Digital consult rooms** to allow residents to access a range of services
  - **Training opportunities** for future workforce skills
  - **Demonstrations and exhibitions** in TPL branches and at SWT's space at 307 Lakeshore Blvd E

3 Digital Complements

Digital tools can strengthen social infrastructure and serve as valuable complements to physical spaces and in person programming.

SIDEWALK LABS BELIEVES

SWL believes that digital complements can enhance access, experience and connection and can serve as valuable tools to improve quality of life.

SIDEWALK LABS IS EXPLORING

SWL is exploring a range of partnership models to catalyze the development and adoption of digital complements to demonstrate the capacity of technology to improve health & well-being, education & opportunity, civic life & engagement and arts & culture in cities.

WE ARE WORKING

SWL is working to support local organizations and partner with the tech ecosystem in Toronto to develop or scale tools that:

- Enable Proactive Approaches to Health Maintenance
- Enable Community as Classroom vision
- Enable Community Influence & Investment
- ADD ARTS & CULTURE BULLET







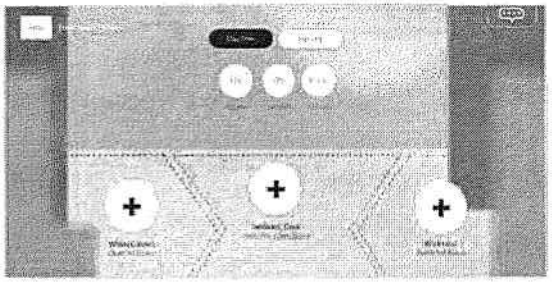
Digital Complement Deep Dive

Community Influence with Digital Public Square

LOREM IPSUM

Community members will have the chance to influence the programming of public spaces, such as Parliament Plaza through suggestions for programming as part of an app called Sidewalk Toronto Decides, being designed with Digital Public Square.



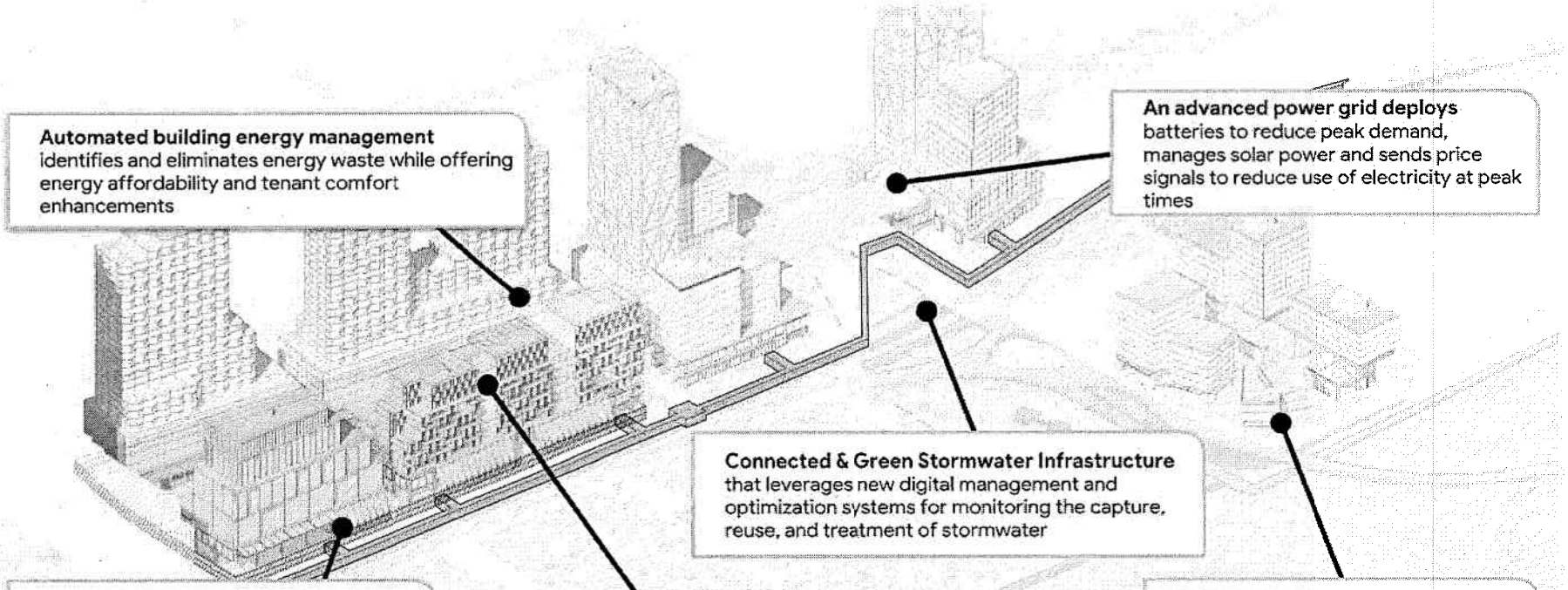


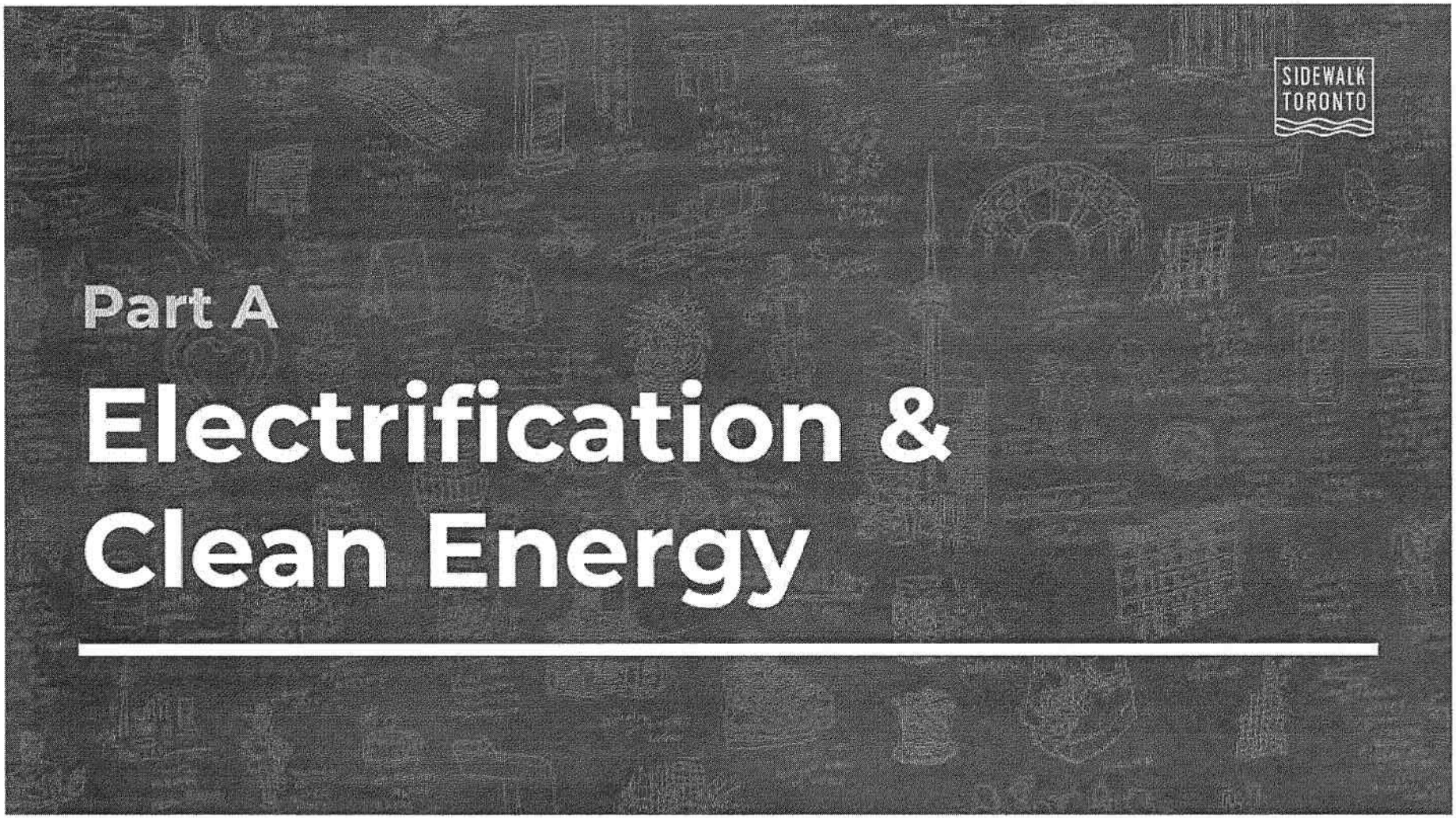


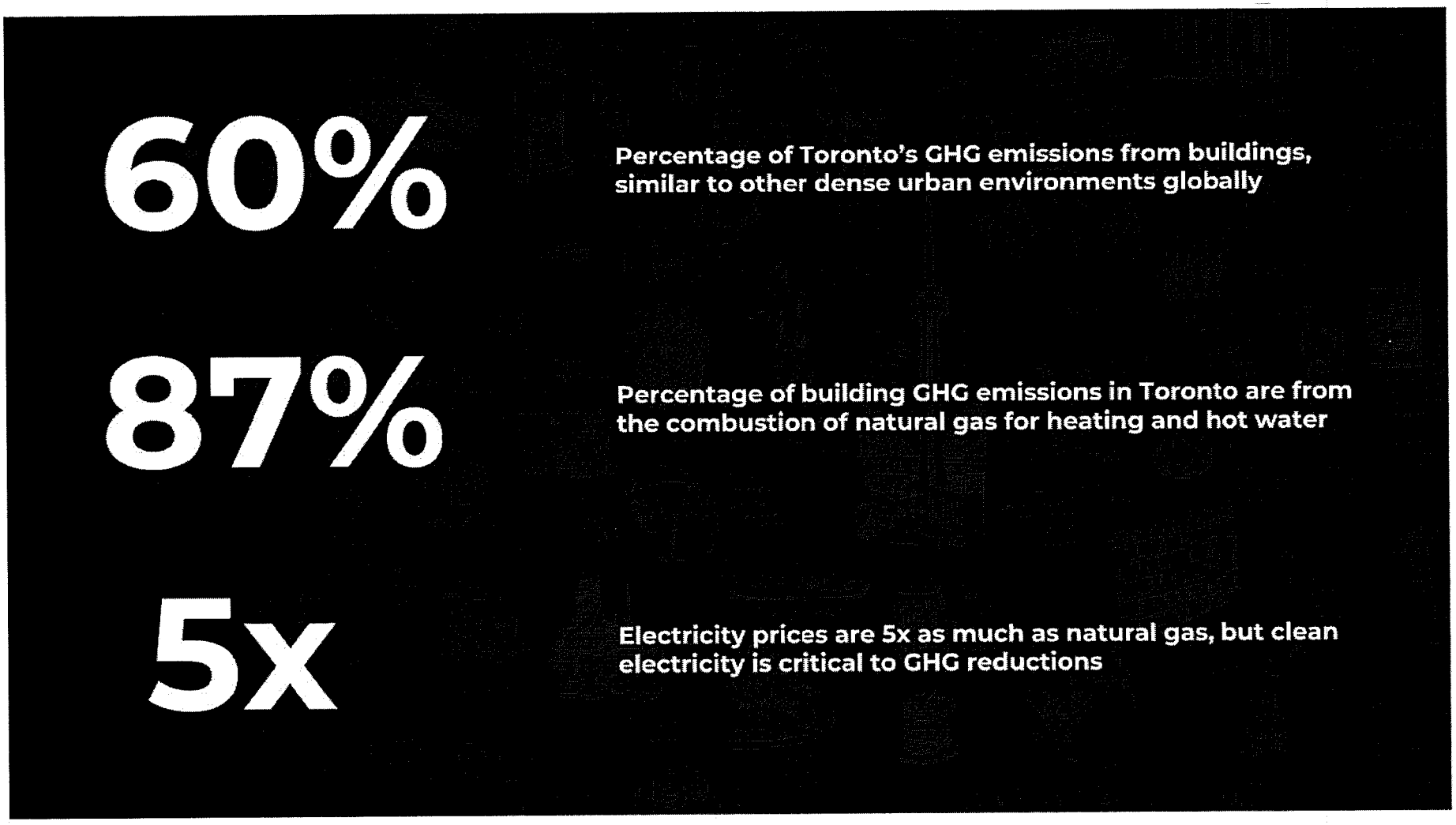

SIDEWALK TORONTO
Breakout 3
Sustainability
97


Our vision
A new standard of sustainability that creates a blueprint for climate-positive communities
98

Creating a Blueprint Climate Positive Neighbourhood




SIDEWALK
TORONTO
Part A
Electrification &
Clean Energy


60%
Percentage of Toronto's GHG emissions from buildings, similar to other dense urban environments globally
87%
Percentage of building GHG emissions in Toronto are from the combustion of natural gas for heating and hot water
5x
Electricity prices are 5x as much as natural gas, but clean electricity is critical to GHG reductions

Sidewalk Toronto's Approach to Affordable Electrification

Remove Natural Gas

Replace boilers with heat pumps
+ fossil-fuel free thermal grid

Manage Electrical Demands

To fit within within existing power grid capacity,
by low load buildings and dynamic utility pricing

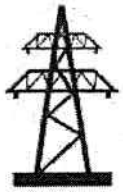
Eliminate Energy Waste

Weed out the electricity use no
one cares about, to reduce cost

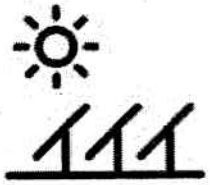
= Affordable Electrification

Our Approach to Affordable Electrification

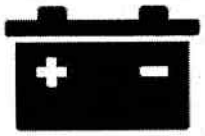
Technologies and infrastructure



Toronto Hydro distribution as the primary source of electricity



Rooftop solar PV will provide 9% of annual energy demand



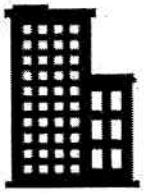
Battery energy storage to manage energy bills and enhance resiliency



All-electric transportation including public transit, shared AV shuttles



Heat pumps for all heating and cooling, including geoexchange



Toronto Green Standards V3 Tier 3, coupled with outcome-based code



New rates to reward load-shifting and use of off-peak renewables

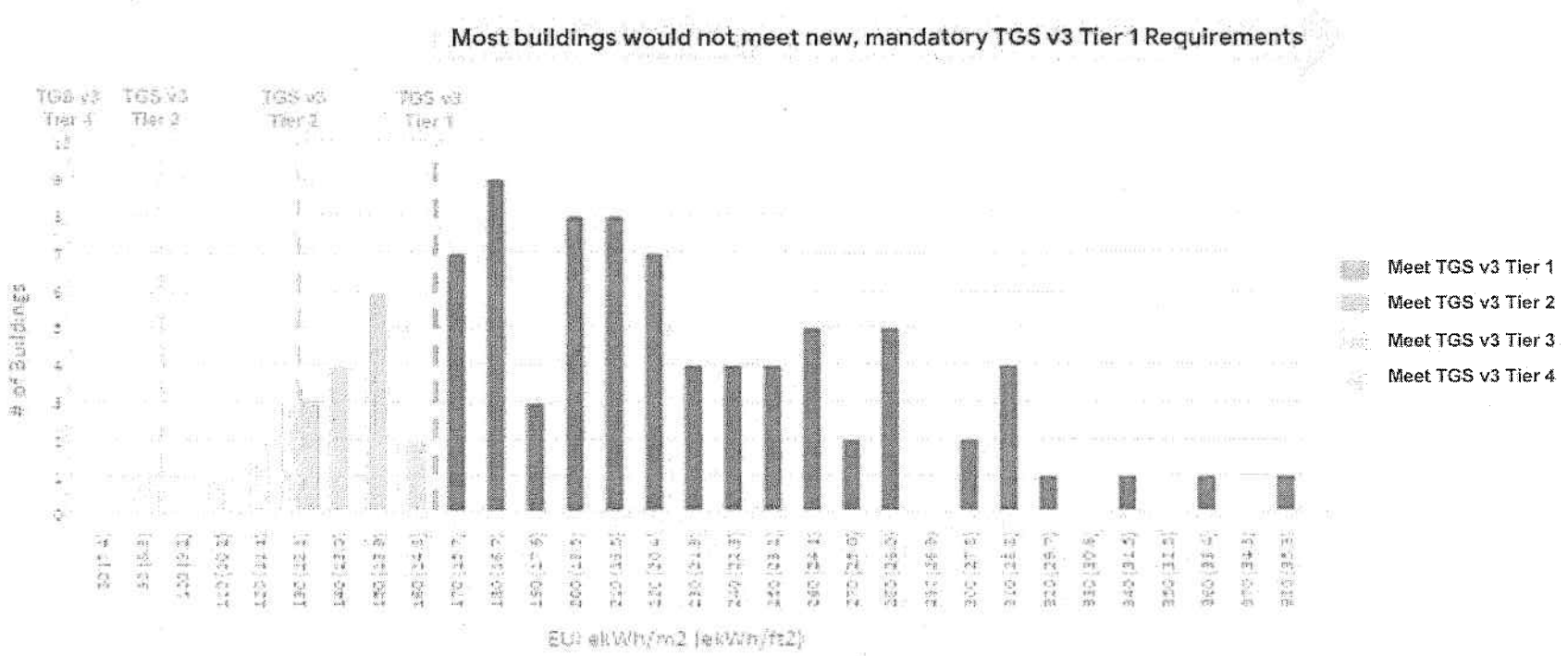


Automated response to energy rates, saving money & reducing GHGs


A new urban Climate Positive community starts
with buildings that truly use less energy
104

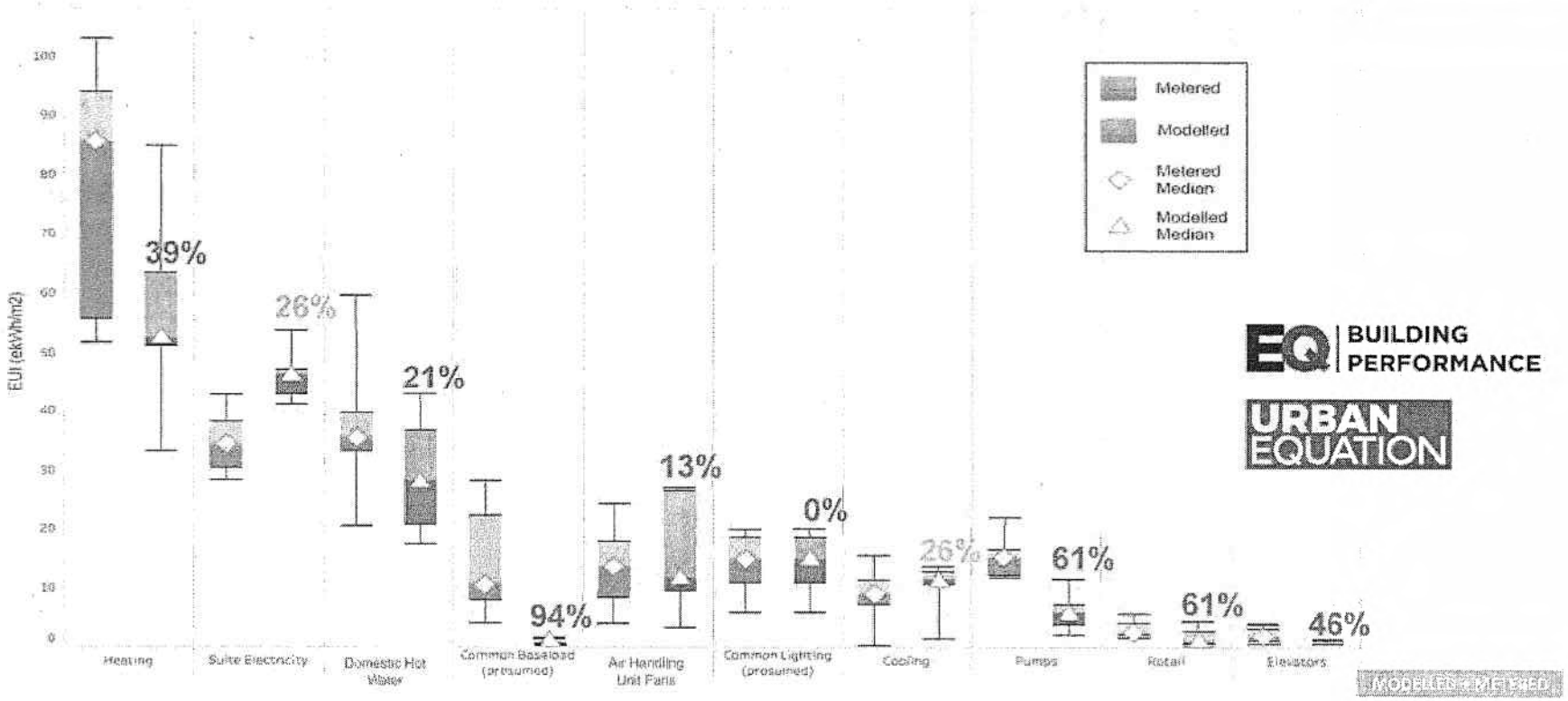
How much energy do typical buildings consume?

As it turns out, a lot.



Modelled vs. Metered Energy Performance

24% more natural gas and 11% more electricity than predicted

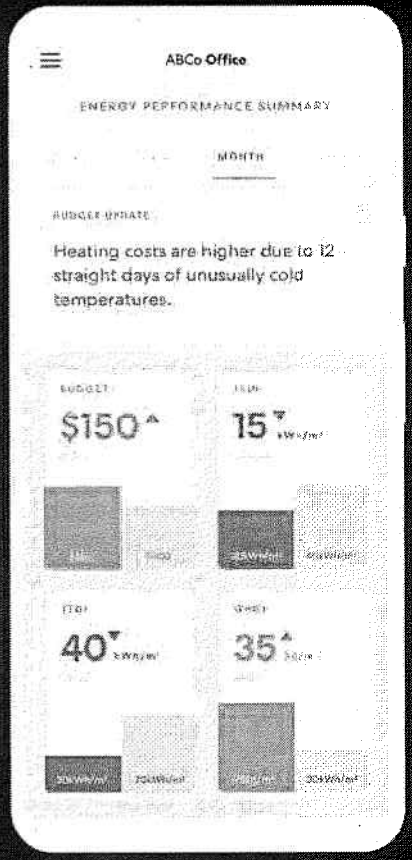


BUILDING PERFORMANCE

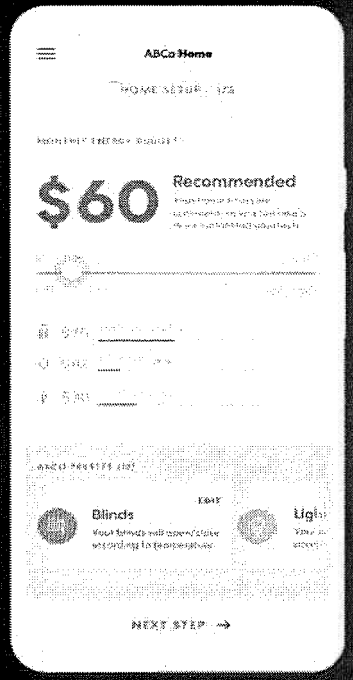
URBAN EQUATION

Target is a tool that compares a building's actual performance with City energy and GHG targets (e.g. Toronto Green Standard Tier 3) accounting for the factors that make buildings different:

- Occupant density
- Weather conditions
- Use (e.g. an energy intensive video production studio versus a quiet reading library)

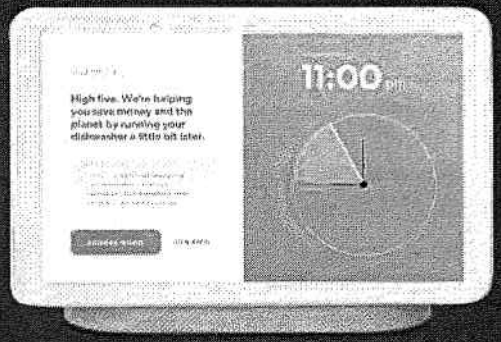


ONBOARDING WITH YOUR UTILITY



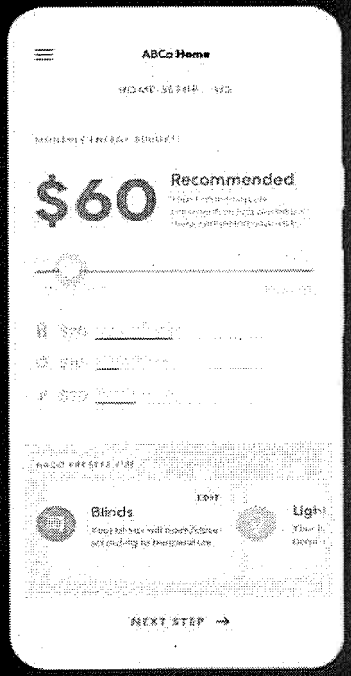
AB Home lets you set your energy budget and live to it

SMART ADJUSTMENTS



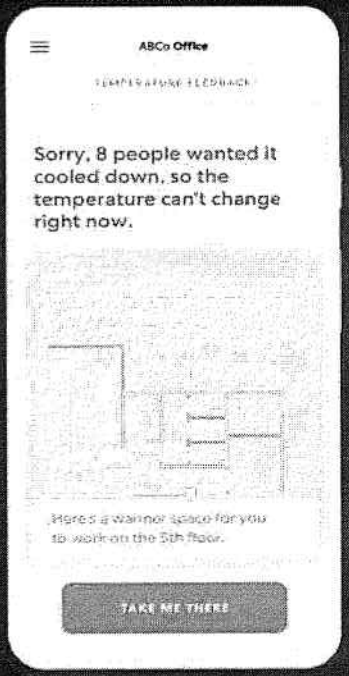
Scheduling activities throughout the home adjust based on peak energy times to prevent unnecessary cost and greenhouse gas emissions.

ONBOARDING WITH YOUR UTILITY



AB Home lets you set your energy budget and live to it

FULLY RESPONSIVE



AB Office responds fully and fairly to tenant comfort requests

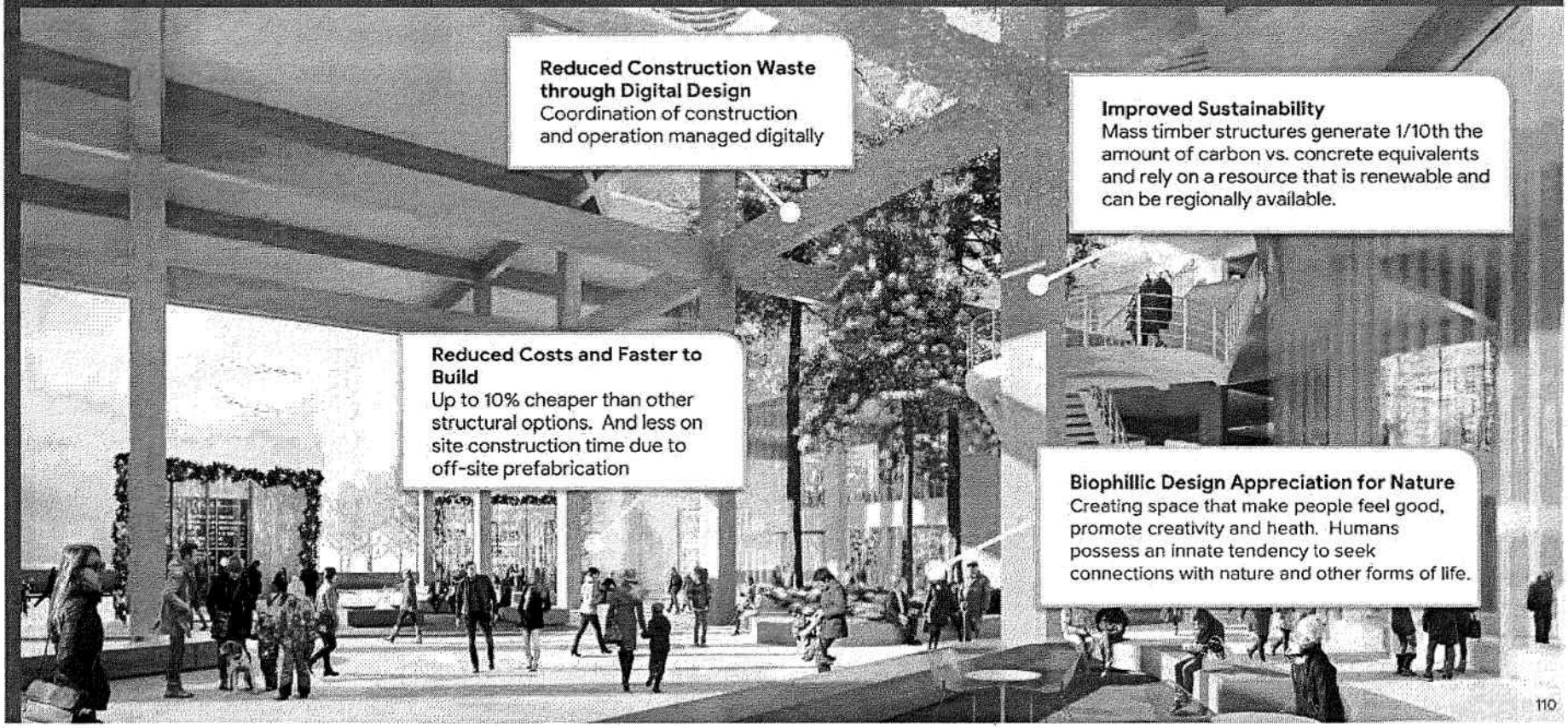
OPERATIONAL EFFICIENCIES



AB Core handles a lot of the nuisance in managing a building.

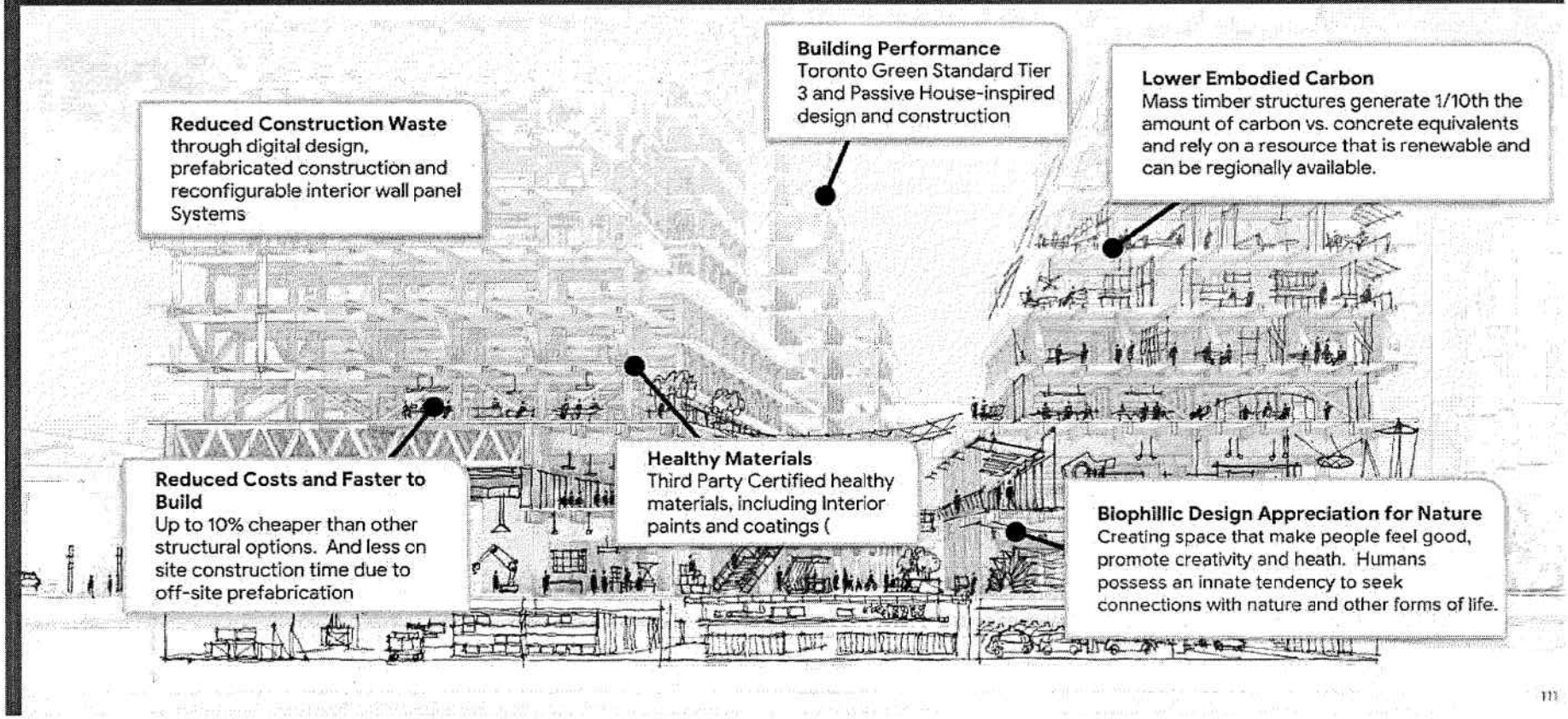
Sustainable Construction Materials

All buildings made from Mass Timber



Building Innovations

New materials, technologies and with greater flexibility for diverse uses



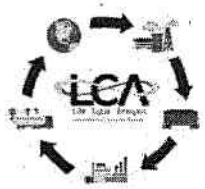
Healthy Building Materials

Building Innovations



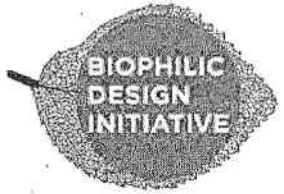
Healthy Materials Improved Indoor Air Quality

Provide healthy environments for people to thrive. Air pollution can cause both short term and long term effects on health and many people are concerned about pollution in the air that they breathe. Along with proper ventilation, materials introduced to the space maintain the healthy spaces possible.



Protecting Embodied Energy within products

Minimize carbon impact of materials- Targeting Materials that provide carbon sequestration and a low embodied energy. Looking to materials that are innately sustainable as natural products, that produce as little waste as possible during the manufacturing process and the end of life.



Biophilic Design Appreciation for Nature

Creating space that make people feel good, promote creativity and heath. Humans possess an innate tendency to seek connections with nature and other forms of life.

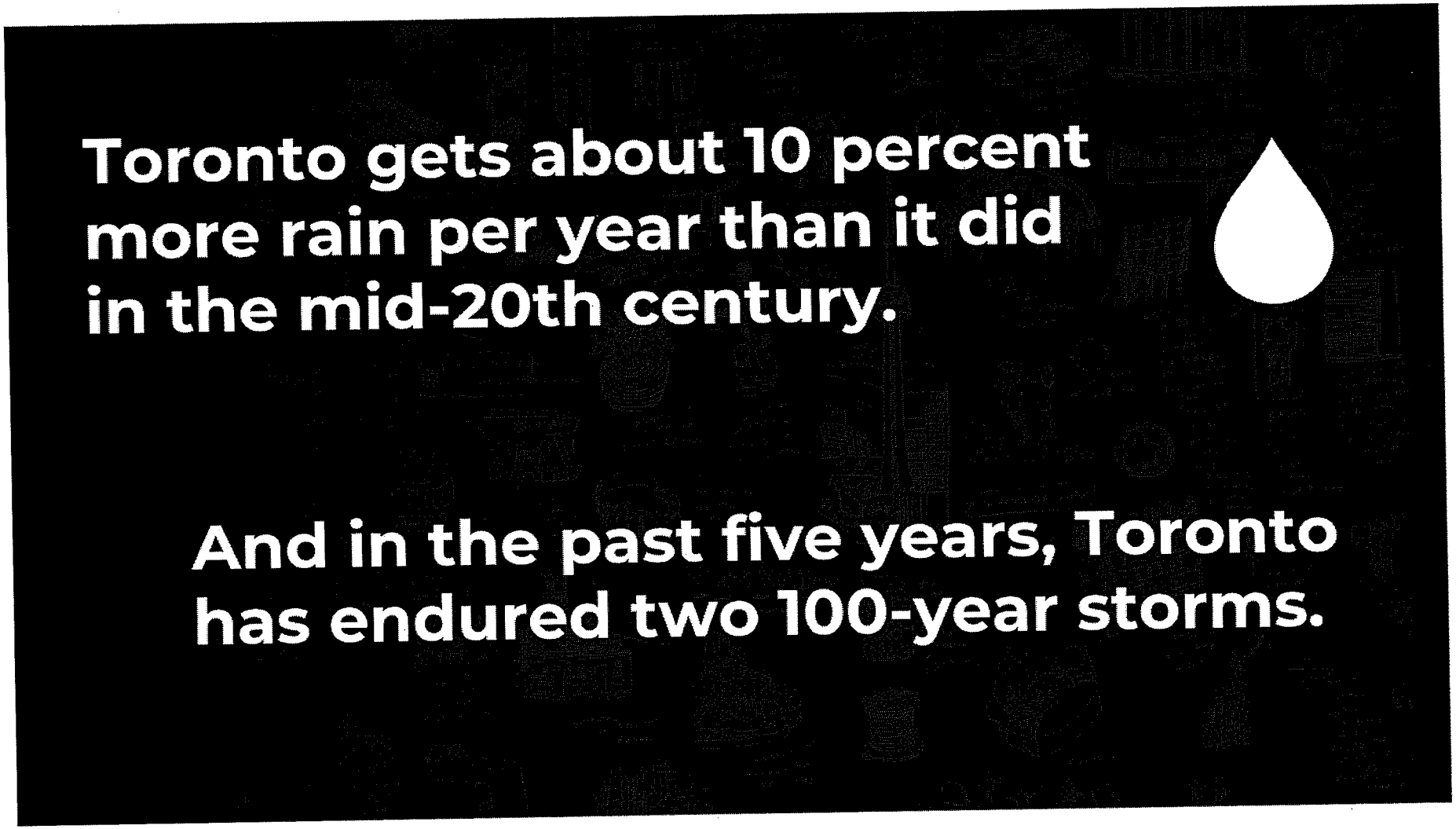
Healthy Building Materials

Building Innovations

Third party certified adhesive, sealants, paints and coatings meeting the most aggressive **LEED** Requirements

Product Categories	Scope	Testing Criteria	Certification Label
Interior paints and coatings* (applied on site)	Applied to walls, ceilings, floors	CDPH Standard Method v1.1* OR AgBB**	SCS Indoor Advantage/ Gold OR UL Greenguard Gold OR Indoor Air Comfort Gold
Interior adhesives and sealants applied on site (non- flooring adhesive)*	Applied to all interior surfaces within the waterproofing membrane	CDPH Standard Method v1.1* OR AgBB**	SCS Indoor Advantage/ Gold OR UL Greenguard Gold OR Blue Angel OR EMICODE
Interior flooring adhesives and sealants applied on site*	Applied to all interior surfaces within the waterproofing membrane	CDPH Standard Method v1.1* OR AgBB**	SCS Indoor Advantage/ Gold OR MAS CG OR UL Greenguard Gold OR Blue Angel


SIDEWALK
TORONTO
Part B
Connected & Green
Water Infrastructure


Toronto gets about 10 percent more rain per year than it did in the mid-20th century.
And in the past five years, Toronto has endured two 100-year storms.

District-wide and digital green infrastructure

Our Approach to Stormwater Management

SIDEWALK TORONTO

Designing green infrastructure throughout the neighbourhood



Extensive green infrastructure maximizes capture of stormwater on site, in roadways, plazas, while enhancing the public realm

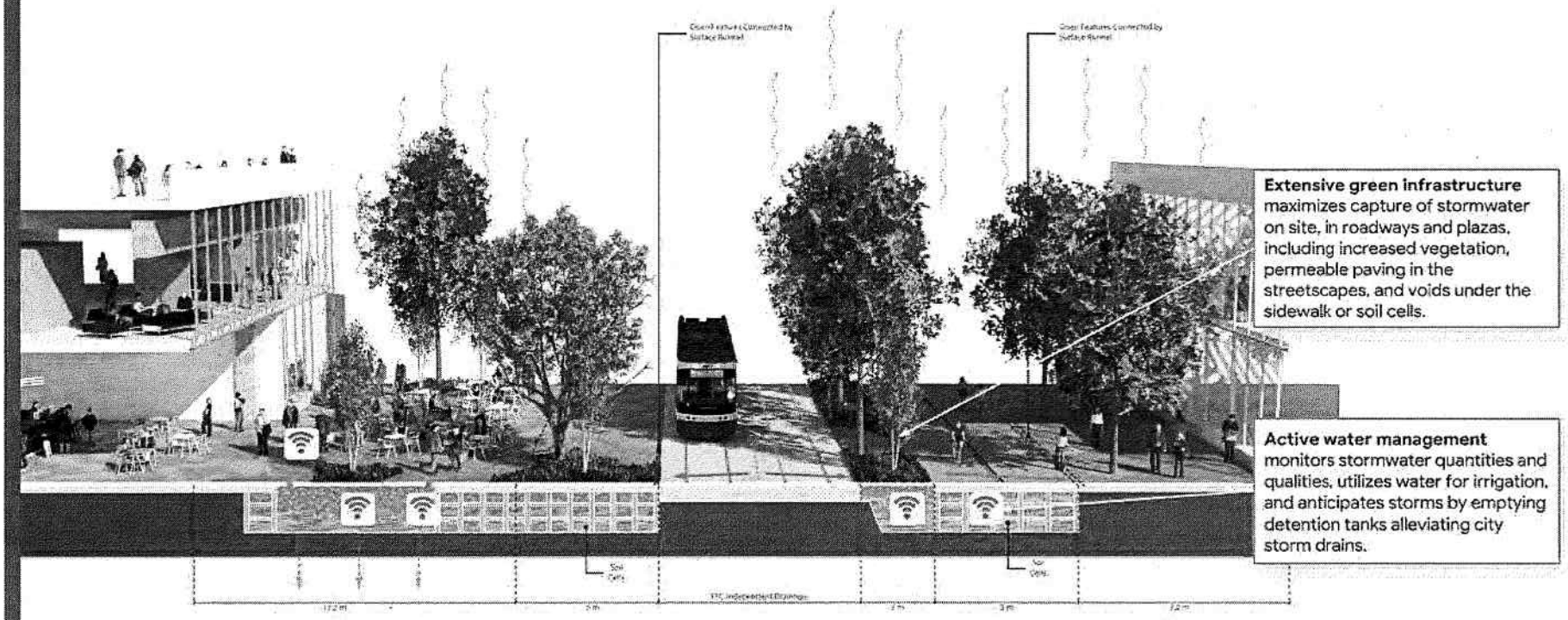
Using digital technology to monitor stormwater



Digital monitoring can measure levels of salinity, empty tanks or cisterns in advance of storms, reducing need for hard infrastructure

Queens Quay East

Our Approach to Stormwater Management



Extensive green infrastructure maximizes capture of stormwater on site, in roadways and plazas, including increased vegetation, permeable paving in the streetscapes, and voids under the sidewalk or soil cells.

Active water management monitors stormwater quantities and qualities, utilizes water for irrigation, and anticipates storms by emptying detention tanks alleviating city storm drains.

Human Benefits of Green Infrastructure

Our Approach to Stormwater Management

SIDEWALK TORONTO

Reduce Heat Island Effect
Plants shade surfaces, reflect radiation, and release moisture to cool the urban environment

Enhance Biophilia
Natural landscapes improve health and well being in the built world while embracing the seasons

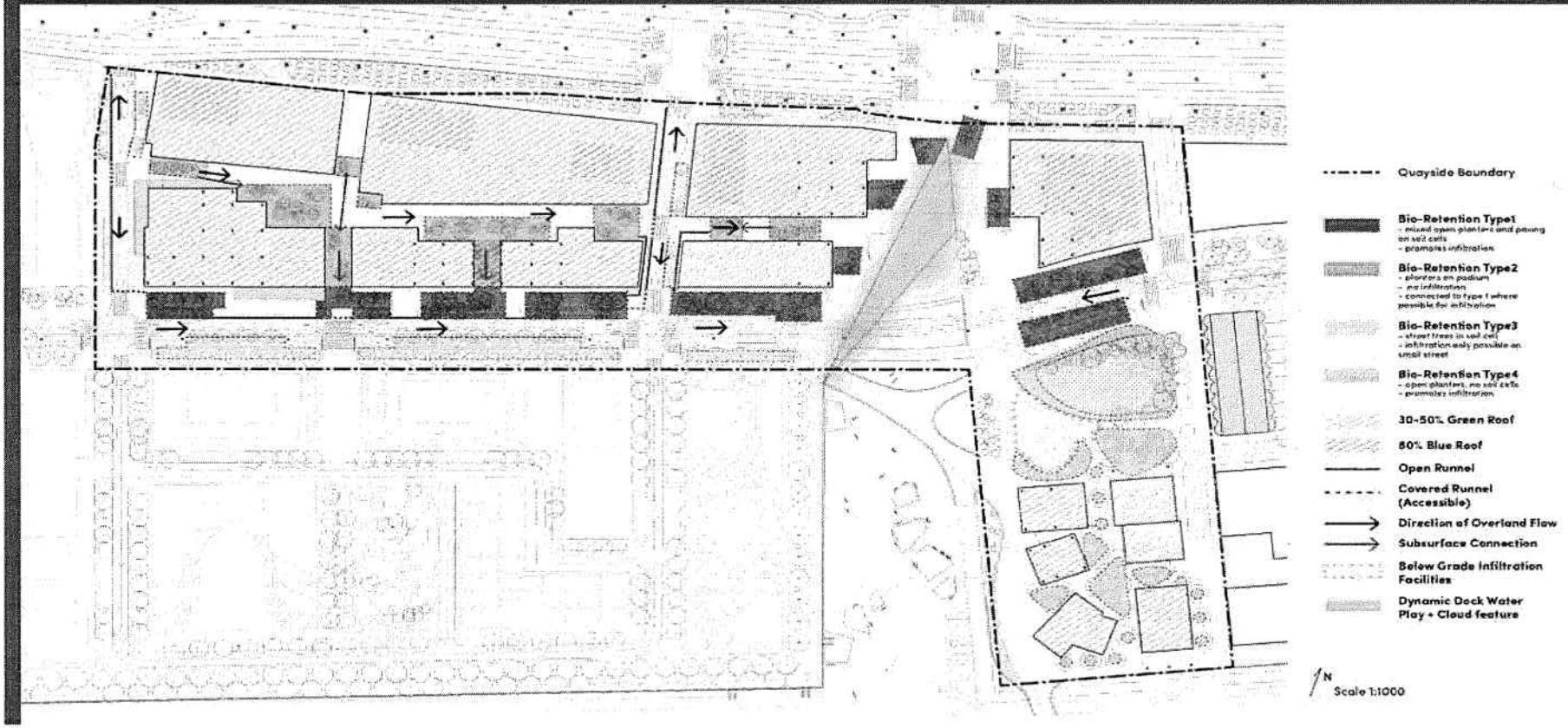
Reconnect with Lake Ontario
Land-Water Scapes direct the public to the waterfront with the natural flow of streams

Design for Tomorrow
Permeable modular paving melds the artistry of the



Site Plan

Our Approach to Stormwater Management




SIDEWALK TORONTO
Breakout 4
Responsible Data Use
120

A New Standard for Data & Privacy

The purpose for urban data collection in Sidewalk Toronto is to improve the day-to-day operation of the neighbourhood and to ultimately create a place that's more sustainable, accessible, and responsive to local needs. Four Key Components of Responsible Data Use

Civic Data Trust

An independent entity to control, manage, and make publicly accessible all data that could reasonably be considered a public asset, and a set of rules that would apply to all entities operating in Quayside, including Sidewalk Lab. With the Data Trust, we move away from entities, including Sidewalk Labs, solely owning and controlling these assets.

RDIA

Responsible Data Impact Assessment

Publicly auditable assessment for all public and private digital services required before data is collected and used.

A New Global Standard for the Use of Urban Data

Sidewalk's proposed approach to digital governance in Quayside will demonstrate to Toronto, Canada, and the rest of the world that cities do not need to sacrifice their values of inclusion and privacy for opportunity in the digital age.

Open Standards

Sidewalk will base its technology on open standards, making it easy for others to build and connect new services, offer competitive alternatives, and drive innovation; the Data Trust might consider encouraging or requiring open standards, as well.

RDU Guidelines

Responsible Data Use Guidelines

Application of the guidelines to all parties in Quayside, not just Sidewalk Labs, to put personal privacy and the public good first, while fostering innovation.

12
1

Sidewalk Labs Responsible Data Use Guidelines

People first, privacy first.

Our people-first approach to responsible data use will apply Canadian values of diversity, inclusion, and privacy as a fundamental human right. It will remain centered on impacts to citizens and the public interest.

Beneficial purpose.

Data collection and use should be purposeful, intentional, and tightly connected to the ultimate benefit that we are striving to achieve. We will not collect and/or use data for the sake of having data.

Transparent.

We will be transparent about what we are collecting and why, clearly explain the intended benefit of that data use, and if the purpose changes, we will communicate what has changed and why.

Open.

Whenever possible and without compromising personal privacy, we will seek to make the data collected as part of Sidewalk Toronto open and accessible, with the goal to enable innovation and entrepreneurship.

Proactive engagement.

We will proactively engage the community on data use and will continue to listen and learn from the community as we grow and develop.

Community trust.

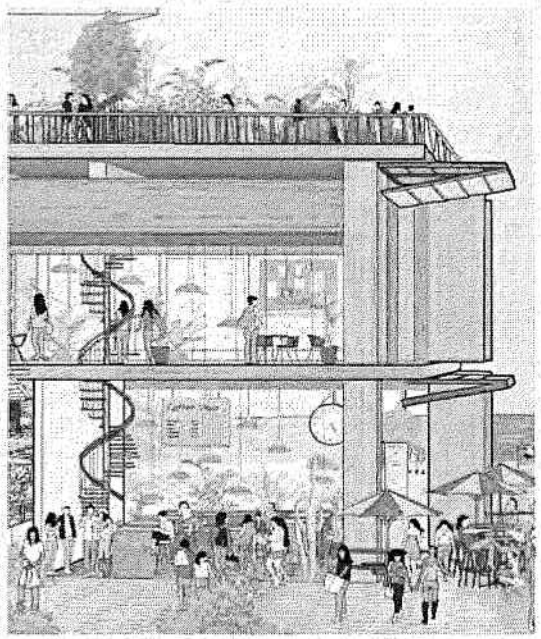
We want the community to trust that our projects, products, and services are developed with its needs in mind. Having good data-handling practices and minimizing breaches of trust is therefore integral to our development process.

Responsible Data Impact Assessments

The Responsible Data Impact Assessment (RDIA)
is a process we are implementing to apply the principles in a structured, efficient, demonstrable way.

It's also how we implement Privacy by Design.

RDIAs will be submitted to the Civic Data Trust.



Responsible Data Impact Assessment

(submitted to Civic Data Trust)

- **PURPOSE** of the project/product/service, who is involved and who is accountable
- **DATA**: a full understanding of the data, sources, data use and parties involved
- **IMPACT** on parties and, in particular, individuals
- **ANALYZE** risks and benefits

Decision
Whether an appropriate balance of benefits and mitigated risks supports the data processing activity

Civic Data Trust

A Civic Data Trust is a model for stewardship and management of data and digital infrastructure that approves and controls the collection and use of data for the benefit of society and individuals.

A Civic Data Trust is particularly useful where data is being collected and used in an urban environment and there are challenges in obtaining meaningful consent.

The Civic Data Trust is an independent third party that ensures that value from data goes to the people, communities, government, industry, and society from which it was collected, and that data privacy and security are protected.

A Data Review Board, assembled of diverse members of the community, would monitor and enforce data collection and use.



Other cities and countries around the world (e.g., Canada, Barcelona, Estonia) have implemented variations of data trusts.

Defining Urban Data

Data collected in the physical environment, particularly in public spaces, will be the domain of the Civic Data Trust.

Urban Data is data collected in a physical space in the city, which includes:

- Public spaces, such as streets, squares, plazas, parks, and open spaces
- Private spaces accessible to the public, such as building lobbies, courtyards, ground-floor markets, and retail stores
- Private spaces not controlled by those who occupy them (e.g. apartment tenants)

Urban Data is different from other data and requires a different approach because:

- It could reasonably be considered a public asset.
- Individual consent is hard to achieve in public or publicly accessible spaces, unlike when individuals provide data in more traditional contexts.
- Existing requirements attached to the collection of Urban Data only apply when it is identifiable, and are often not followed; there are no requirements attached to the collection of Urban Data that is not personal information.
- The community has the right to expect reasonable protection and proper use of data collected in these spaces.
- Such data raises potential community surveillance concerns.
- Urban Data is anchored to geography, unlike data collected through websites and mobile phones, and lends itself to local governance.

HOW OUR FOCUS ON URBAN DATA REFLECTS WHAT WE'VE HEARD

It acknowledges the consent challenge involved with Urban Data and puts in place a mechanism to obtain "community consent" by:

- **Placing** governance and oversight in the hands of an independent entity that represents the community interest
- **Requiring** Privacy by Design
- **Providing** transparency for the community
- **Enlarging** the types of data that deserves protection beyond personal information to data that has the potential to impact people
- **Focusing** on the entire ecosystem in Quayside, enabling responsible data use and across the board privacy protections

Three example use cases for us to discuss



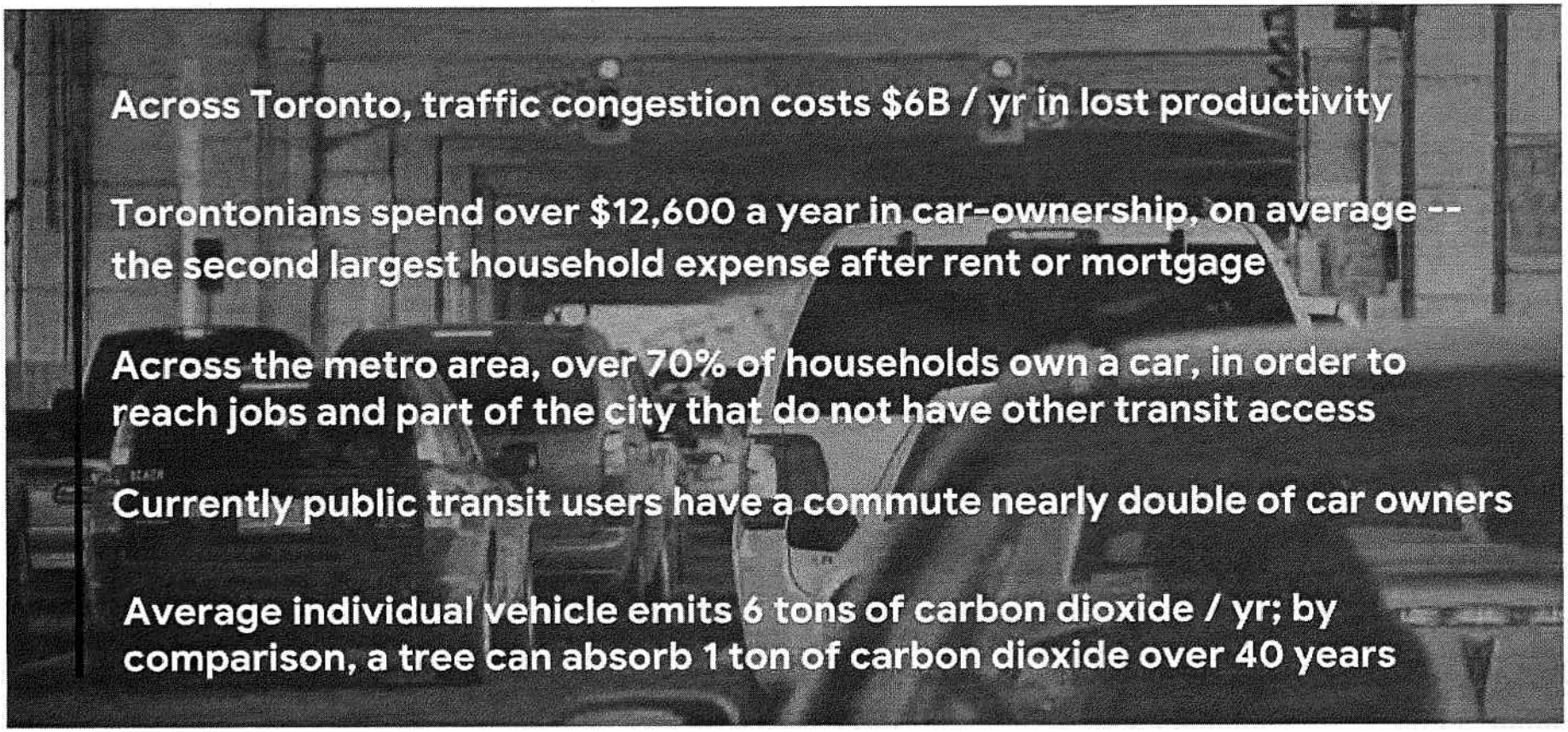




Sidewalk Toronto Proprietary and Confidential

Reduce congestion and create safe streets

Mobility challenges in Toronto

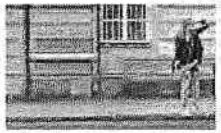


Modus: Reimagining urban movement

CHALLENGES CITIES ARE FACING



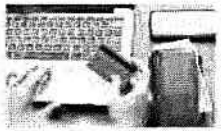
Deaths from transportation continue to rise



Access to transportation can be highly variable, based on income, ability, or circumstance



Most cities do not optimize for multiple modes of transportation within the same location



Customers lack full transparency into personal mobility options, oftentimes overpaying

OVERVIEW OF THE PRODUCT

PRODUCT DESCRIPTION

A system comprised of hardware to understand and manage the mobility network, and software to model, optimize, & communicate.

The system will flexibly adapt to:

- Existing modes (cars, bikes, pedestrians)
- Emerging modes (scooters, drones, AVs)
- Future modes we can't predict today

USE WITHIN QUAYSIDE / TORONTO

Modus will shape mobility for an efficient and safe transportation network, using techniques such as:

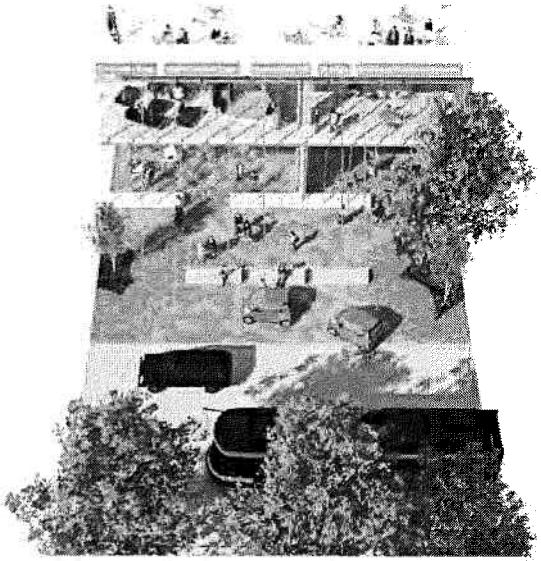
- Active, dynamic management of the curb
- Adaptive signals and dynamic streets informed by real time/projected demand
- Vehicle platooning and routing recommendations

Modus: Targets drivers of traffic congestion and optimizes future AV fleet needs

APPLICATIONS AND USE CASES

- **Dynamic Curb:** a system that uses real-time, historical, and projected data in combination with input from traffic management operators to optimize the regulations and pricing of the curb
- **Signal optimization:** smart traffic signals for prioritized pedestrian/cyclist traffic and movement in "green waves"
- **AV-Dominant network optimization:** network information and optimization engine, that broadcasts data in a standardized format to AVs and other connected vehicles
  - Real time information (e.g. curb availability, curb/road pricing, signal timing, road closures, construction zones, etc)
  - Routing/network optimization recommendations (e.g. platoon availability, suggested routes, etc)

Example: Dynamic curb in Quayside will help manage drop-offs and pick-ups, one of the largest drivers of traffic congestion



Building Energy Challenges in Toronto: Reduce Energy Use in Buildings

Buildings make up 60% of Toronto's GHG emissions

40%-60% of building energy use is uncontrolled

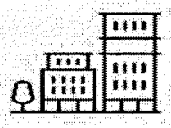
Even controlled building energy is managed by predetermined schedules and settings, in a "set it and leave it" approach

Toronto has one of the cleanest electrical grids in the world. Your electricity produces nearly 75% less GHG emissions than gas, but is not widely adopted due to costs

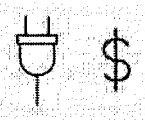


Autonomous Building Systems: **Reduces largest GHG emissions drivers of**

CHALLENGES CITIES ARE FACING



Building make up 60% of Toronto's GHG emissions. 40%-60% of building energy use is uncontrolled.



GHG intensity of gas is 183 g CO2/ekWh so we are using electricity (50 g CO2/ekWh), solar, and thermal, all more expensive than gas.



The existing market is fragmented, across solutions and even naming conventions, preventing a holistic view and inability to control of energy.



Most building energy is managed with predetermined schedules and temperature settings, in a "set it and leave it" style.

OVERVIEW OF THE PRODUCT

PRODUCT DESCRIPTION

A suite of products that automates monitoring and control of devices and equipment to eliminate energy waste, lower energy and operating costs 20%, offer labor efficiencies, and increase comfort across homes, offices, and buildings.

The user-centric product automation partnered with dynamic energy rates will manage costs and prevent wasted energy.

Aims to create an affordable climate positive community.

USE WITHIN QUAYSIDE / TORONTO

Energy management automation and continued learning for systems across Quayside buildings that make comfortable, productive environments.

Autonomous Building Systems: **Specific products target different customers and use cases**

APPLICATIONS AND USE CASES

Office workers can have increased transparency on how their space is managed and the ability to request temperature changes and lighting adjustments.

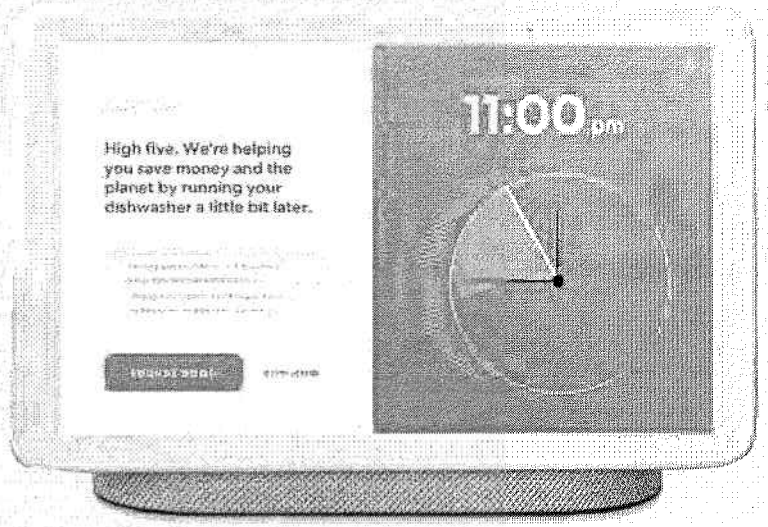
Residents can manage their energy budgets without doing work. The system learns their preferences to create the optimal conditions for waking up, sleeping, and family time, without ever leaving the AC, lights, or heat on unnecessarily.

Building operators are empowered with system insights beyond dashboards and false alarms. Tenant temperature complaints are handled automatically, maintenance requests are placed preemptively, and HVAC systems are controlled based on occupancy and not pre-scheduled based on leases.

Energy regulators can have actionalable comparative data on how buildings are performing against energy and GHG targets, accounting for occupancy and function.

Toronto Hydro has a better understanding of energy uses and systems that respond to demand management.

Example: In Resident use case and product, individuals receive series of "nudges" to manage energy budgets



Making Climate Positive Possible in Homes: Reduce Energy Use in Buildings

HOME SCHEDULER

Created to help manage energy cost and GHG emissions from residential spaces

Takes a proactive role in managing the home, operating systems, appliances, etc. when costs are low or clean energy is available

Generates a data feed for homeowners to understand the actions being taken - and to reject them if they wish

Residents are able to opt out of this system

ONBOARDING



Residents can adjust their energy budget to suit their needs and save energy.

NOTIFICATION



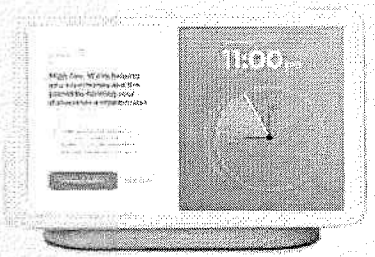
Residents can accept energy-saving changes, or explore other options if it doesn't fit their needs.

AUTOMATION



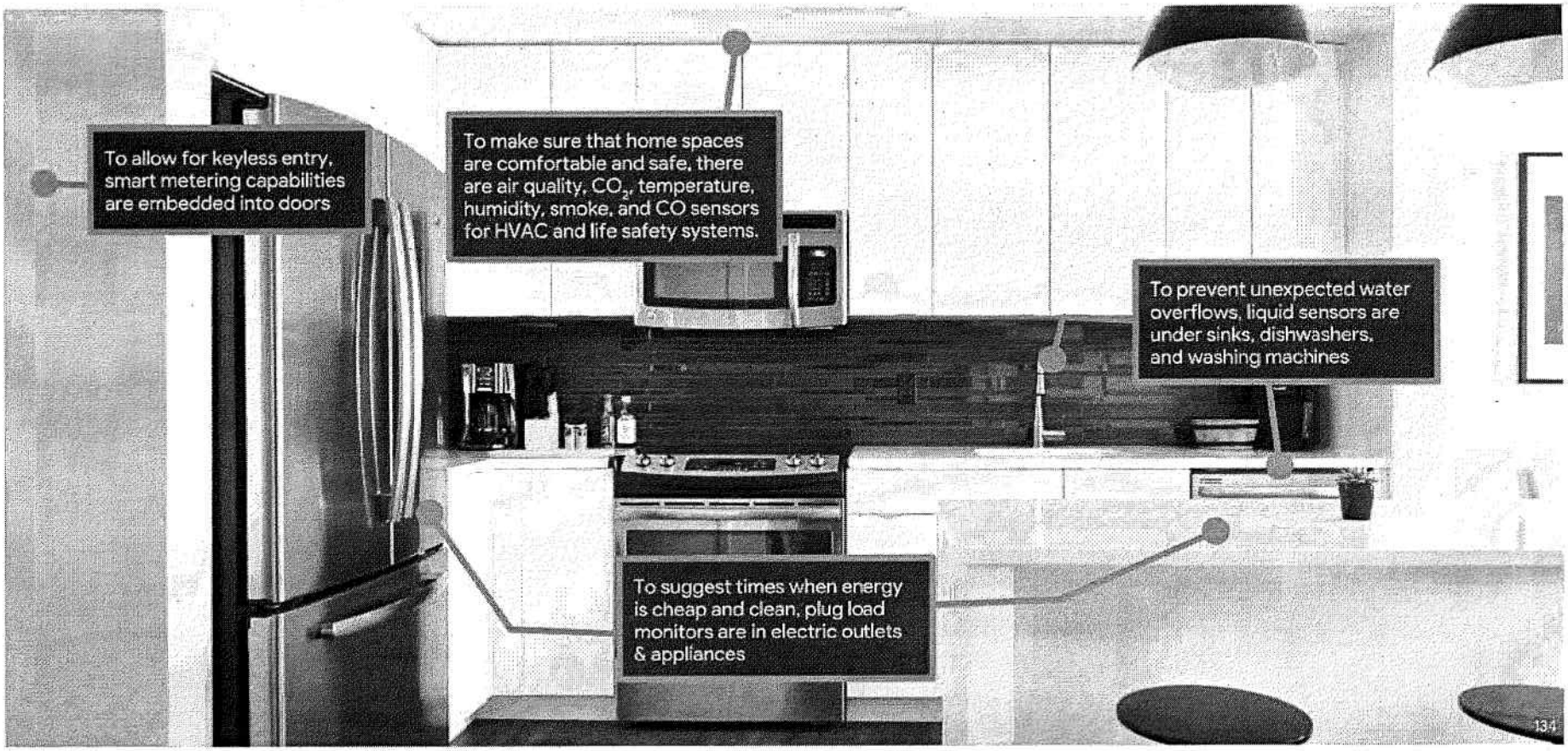
Residents can adjust their automation setting to fit their needs.

SMART ADJUSTMENTS



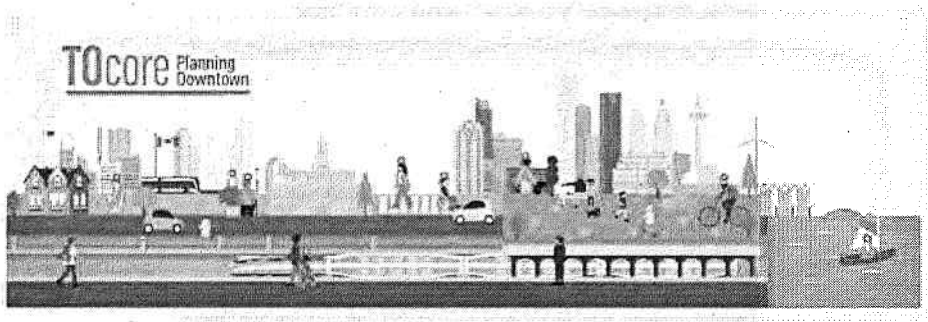
Scheduled activities throughout the home adjust based on peak energy times to prevent unnecessary greenhouse gas emissions.

How It Works for Resident Homes: Reduce Energy Use in Buildings



Public Life Studies: Ensuring public spaces work for people

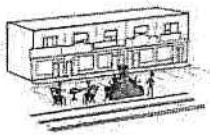
Public Life Studies are a fundamental part of TOCore, Toronto's new plan for downtown. They are used to help evaluate the King Street Transit Pilot and are a key input into the revitalization of David Crombie Park.

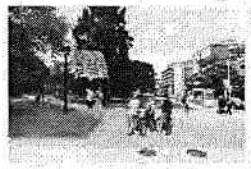


PUBLIC SPACE INCUBATOR











Park People's *Public Space Incubator* program is supporting new ways for communities in Toronto to experiment enlivening and activating the public realm.

We worked with Park People and one of their awardees, the Thorncliffe Park Women's Committee, to prototype an app that makes it easier to collect the public life data needed to understand the impact of their efforts.

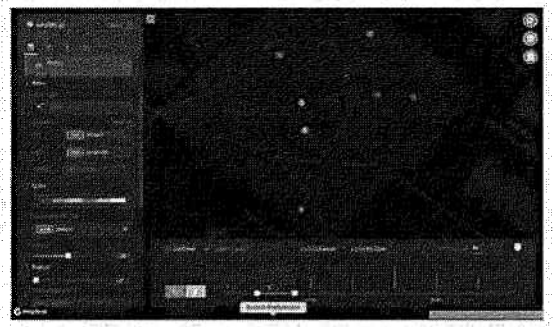
Commons app: Ensuring public spaces work for people

A simple map-based interface lets study volunteers quickly record observations, eliminating inefficiencies that come from paper-based data collection:





A volunteer collecting data in RV Burgess Park



Map-based visualizations can help planners and community members see patterns in how spaces are being used

Pages 459 to 474
are withheld
pursuant to paragraphs
20(1)(b), 20(1)(c) and 20(1)(d)
of the *Access to Information Act*

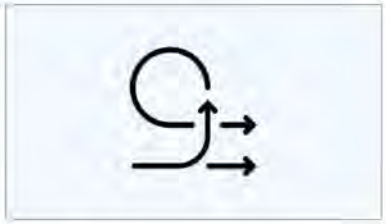
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Les pages 459 à 474
font l'objet d'une exception totale
conformément aux dispositions des
paragraphes
20(1)(b), 20(1)(c) et 20(1)(d)
de la loi sur l'accès à l'information


SIDEWALK LABS
Building Innovation & Housing Affordability
QUAYSIDE MIDP BRIEFING FOR IGSC REPRESENTATIVES
JOHANNA GREENBAUM | KARIM KHALIFA | 01.15.19
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SIDE
WALK
LABS
Building Innovation
KARIM KHALIFA
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Building Innovation: Objectives



Flexibility / Adaptability

Create structures that are more responsive to the needs of its users over time, both on Day 1 and years later



Cost Reduction

Reduce the cost & speed of construction by leveraging scale through a manufactured approach to buildings



Sustainability and Wellness

Build at the highest sustainability standard which positively impacts the environment, lowers cost of utilities, and improves the occupants' well-being



Design Excellence

Innovative building design and architectural excellence on the waterfront

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Building Innovation: Phases

01

Identification of Technology

Explored and identified a series of innovations that make up our strategy for the built environment

02

Proto-Model Development

Developed proto-models to test the integration of specific technologies and variations in design

03

Design & Cost Benchmarking

Commence benchmarking exercise to better understand design and costs of construction based on proto-models

04

Building Design Check

Develop building designs for buildings on Quayside that we will measure against our benchmarks and goals

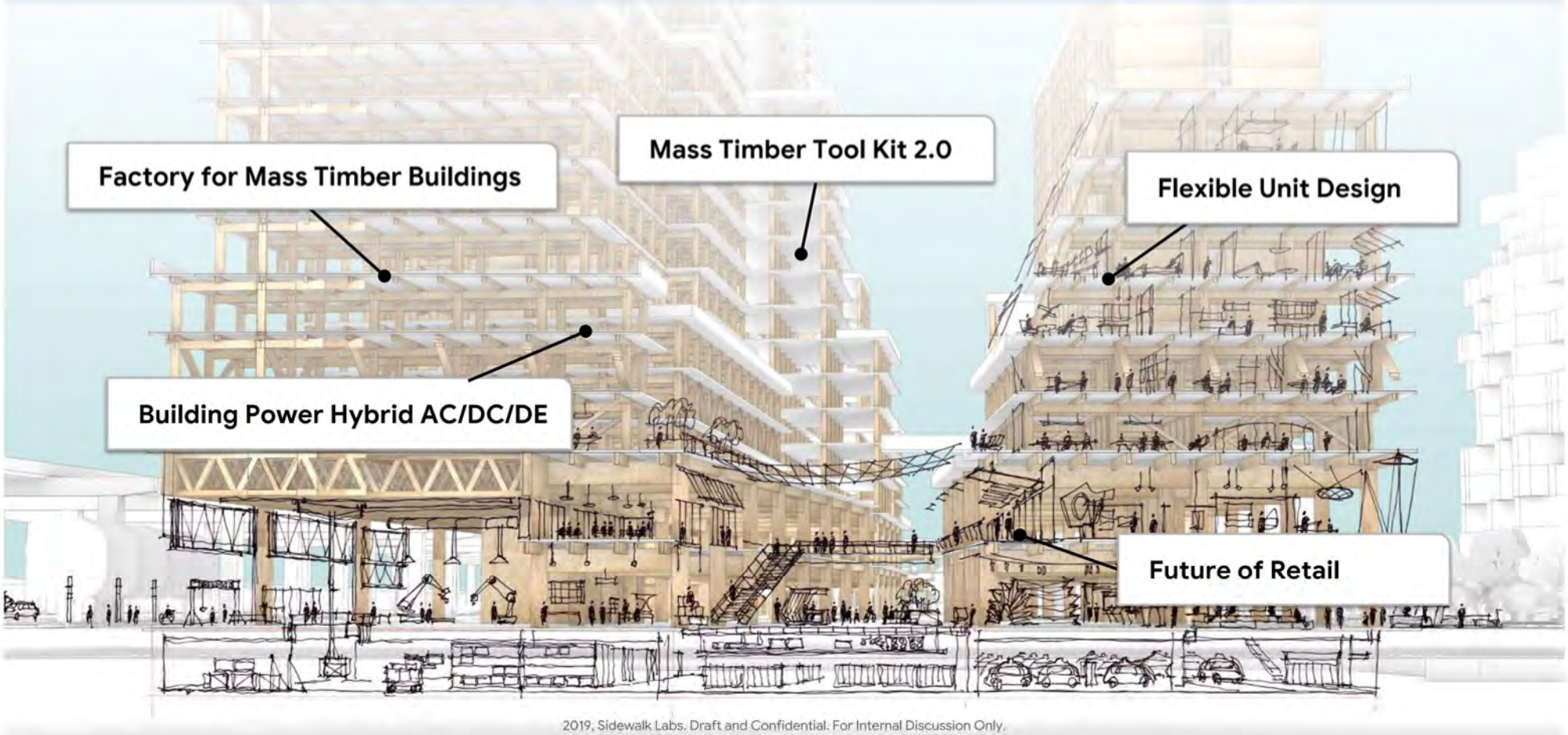
05

Final Proto-Model for Building Authority Review

Develop a building design with City of Toronto input to address all necessary code and alternative method design proposals.

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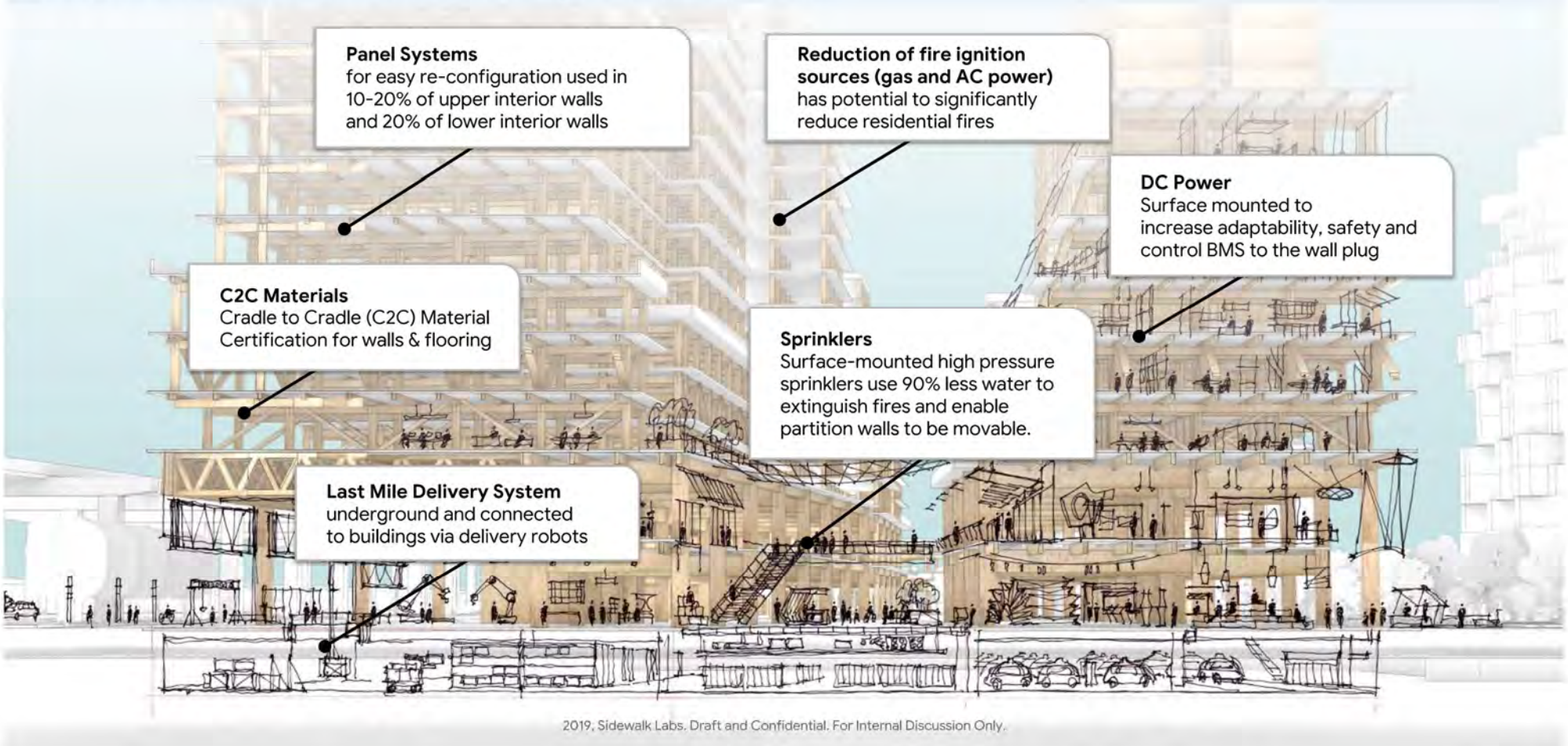
Buildings at Quayside – Discussion Topics



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Building Innovations

Buildings constructed with new materials, technologies and with greater flexibility for diverse uses

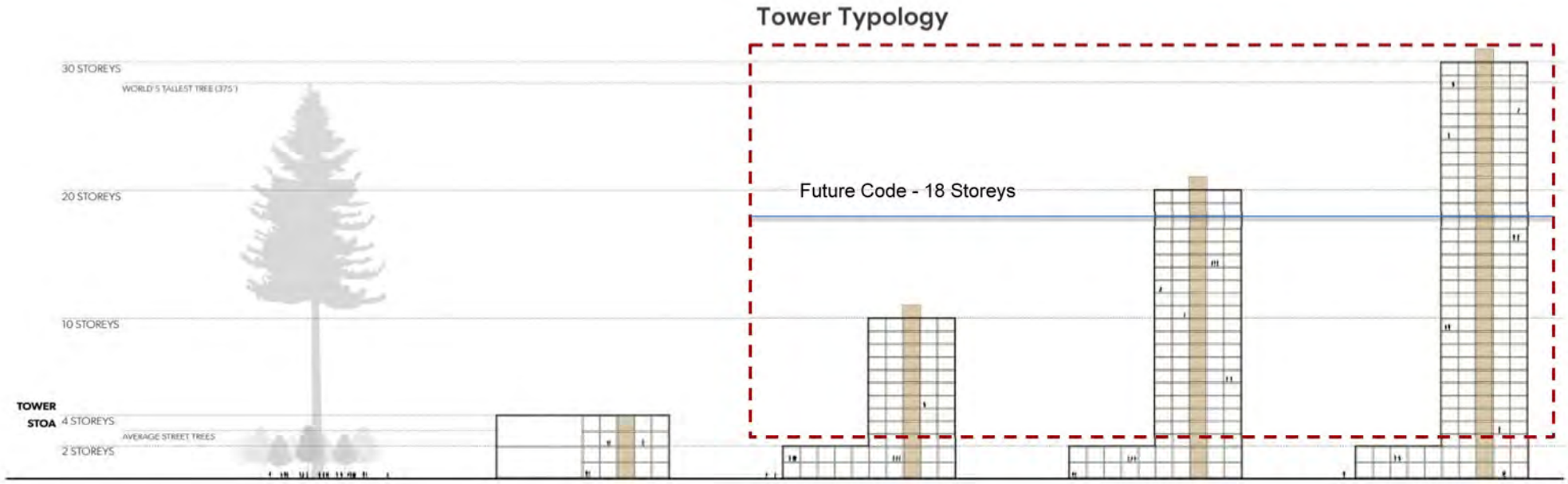


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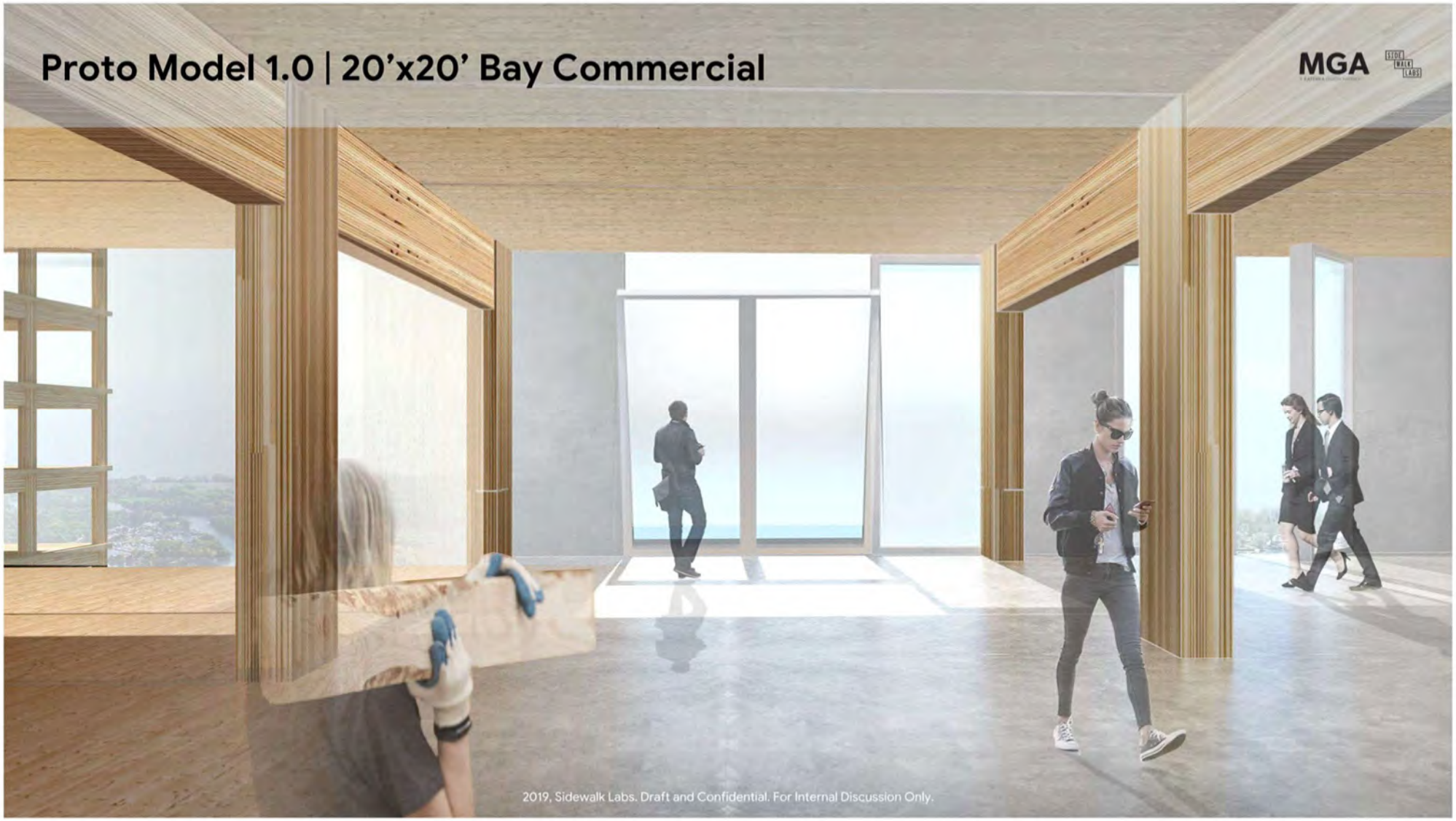

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Buildings
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Mass Timber
Kit of Parts
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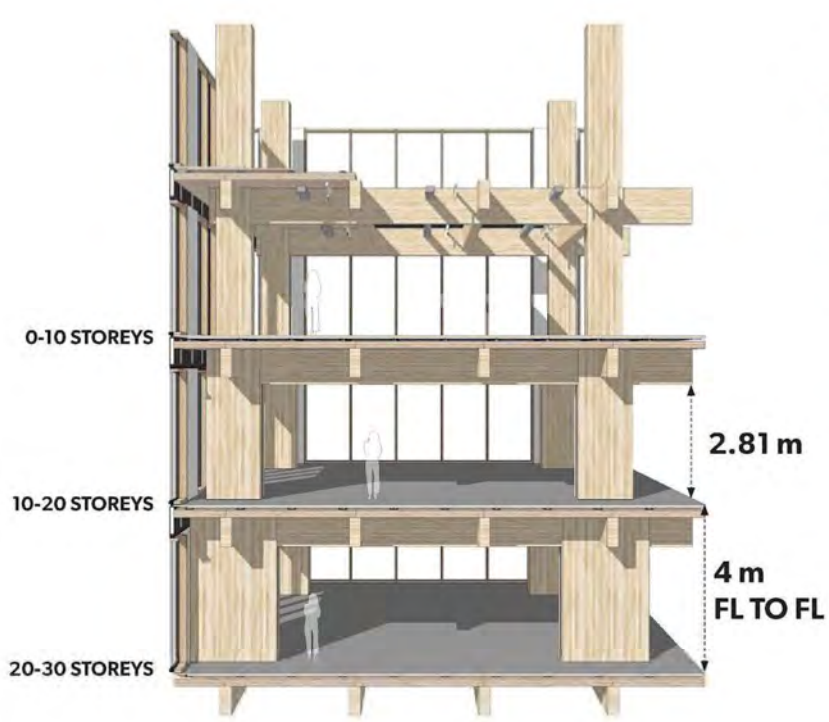
Proto Model 2.0

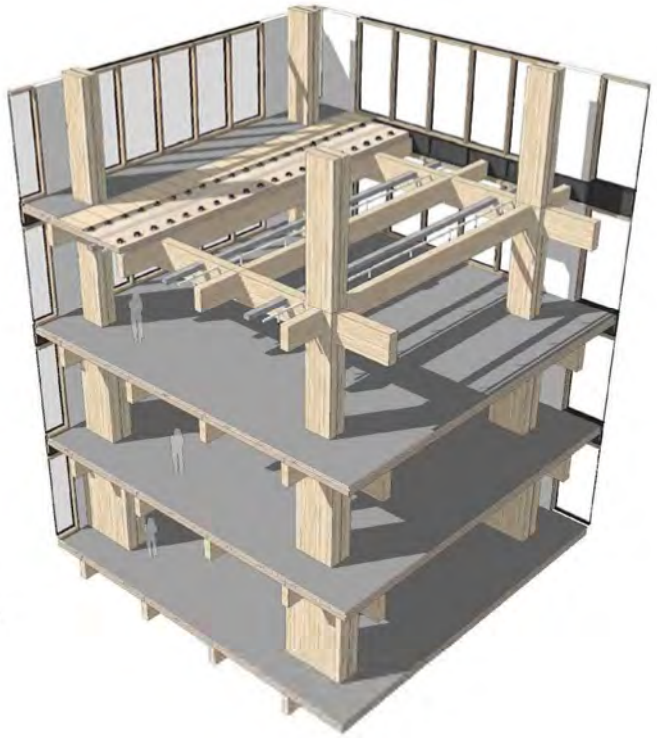


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Proto Model 1.0 | 20'x20' Bay Commercial
MGA
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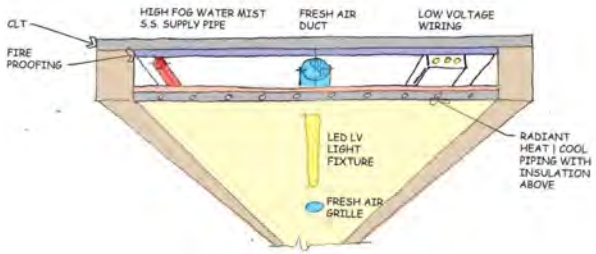
Proto Model 1.0 | 30'x30' Bay Commercial



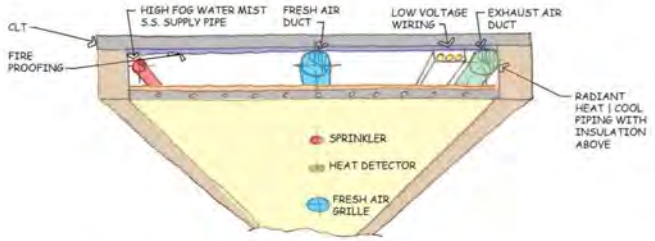


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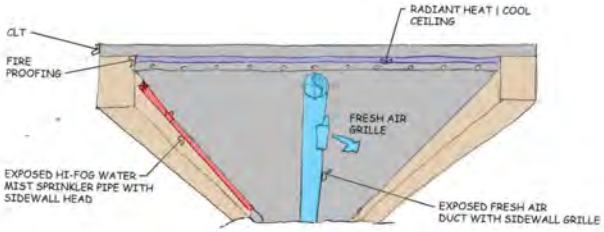
Proto Model 2.0 | Prefabricated Cassettes



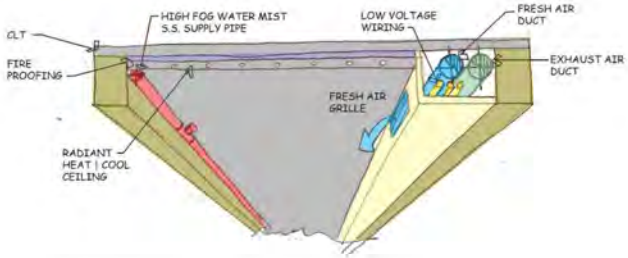
Loft_Flex Cassette with Full Drop Panel Option



Residential Cassette_Full Drop Panel Option



Loft_Flex Cassette_Closed-Coupled Radiant Ceiling Option



Residential Cassette_Soffit Option

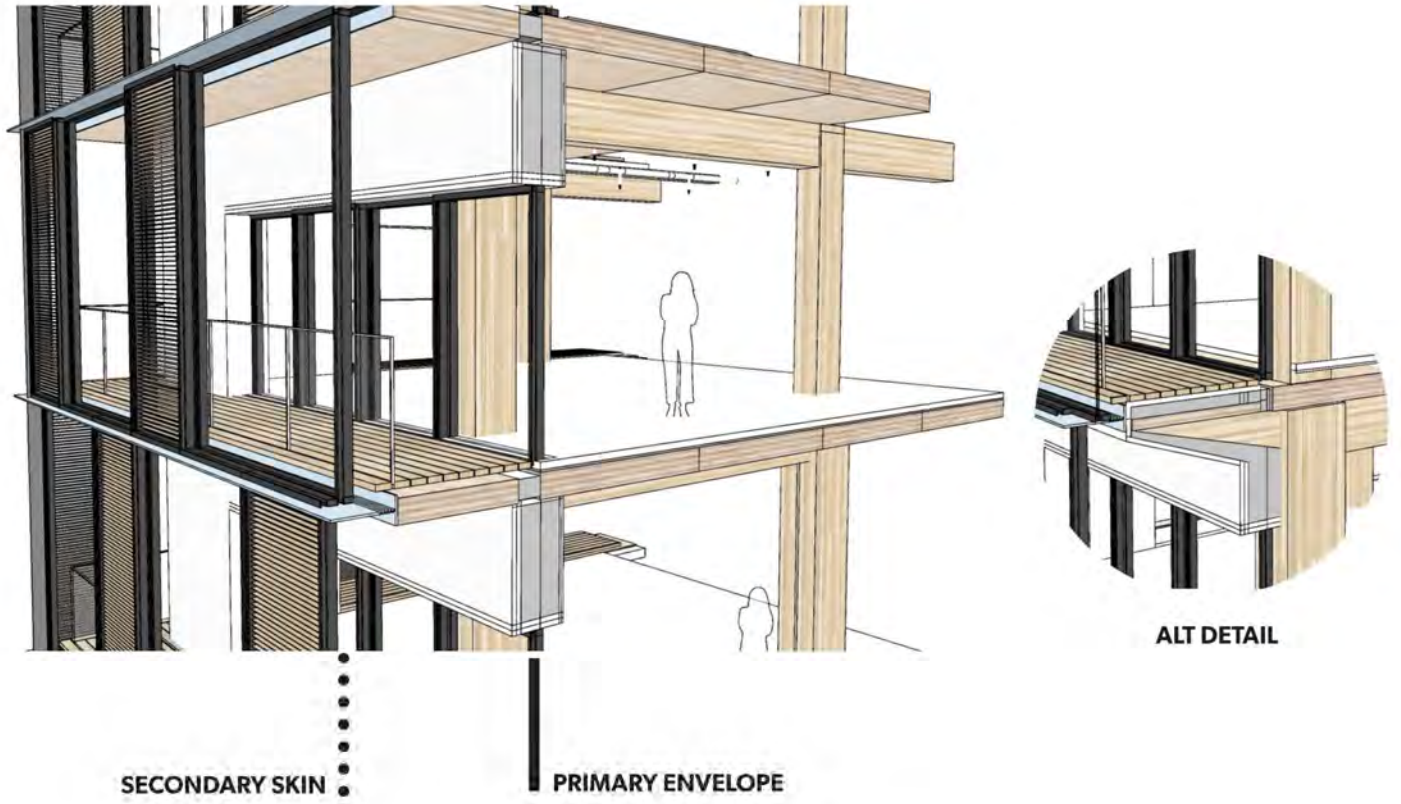
2019, Sidewalk Labs. Draft and Confidential. For Internal Discussion Only.

Proto Model 1.0 | Passive Envelope



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Proto Model 2.0 | Passive Double Skin



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Proto Model 2.0 | Passive Double Skin



Shikkui Plaster - Fire Testing at UL for timber encapsulation



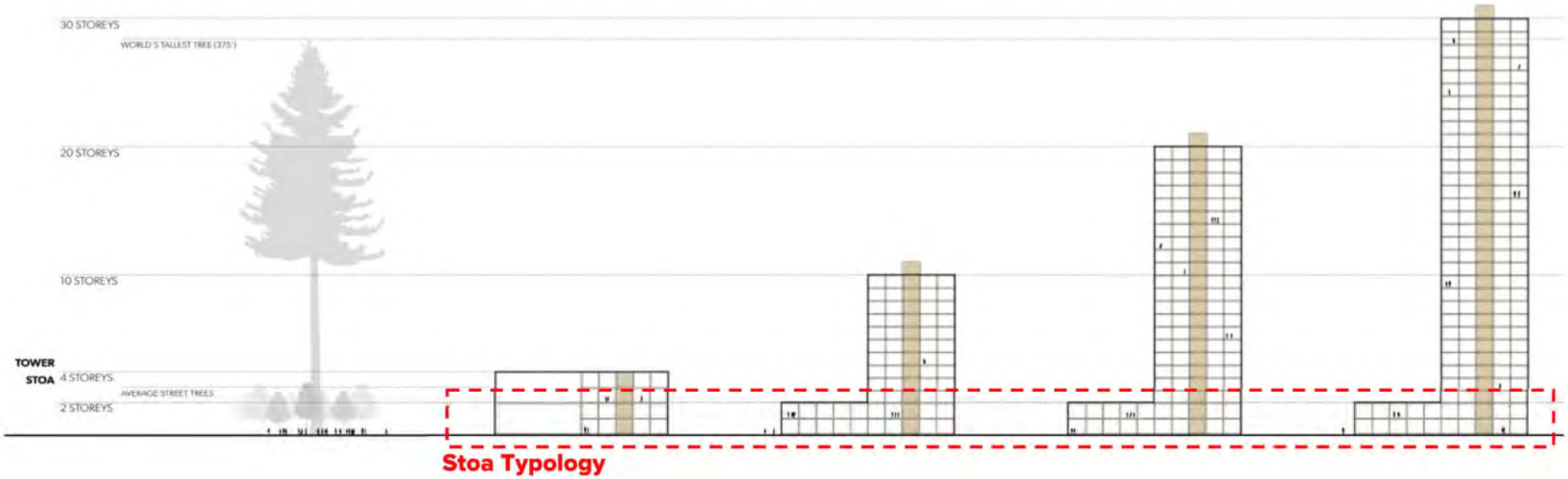


Shikkui Plaster

- Cradle to Cradle Certified
- 1000+ year old product
- Made of slaked lime, seaweed, eggshells
- Antiseptic, hypoallergenic, mold fungus resistant
- Zero VOC
- Waste can be composted or directly mixed in the garden
- Spray or hand applied
- Can be painted and repaired

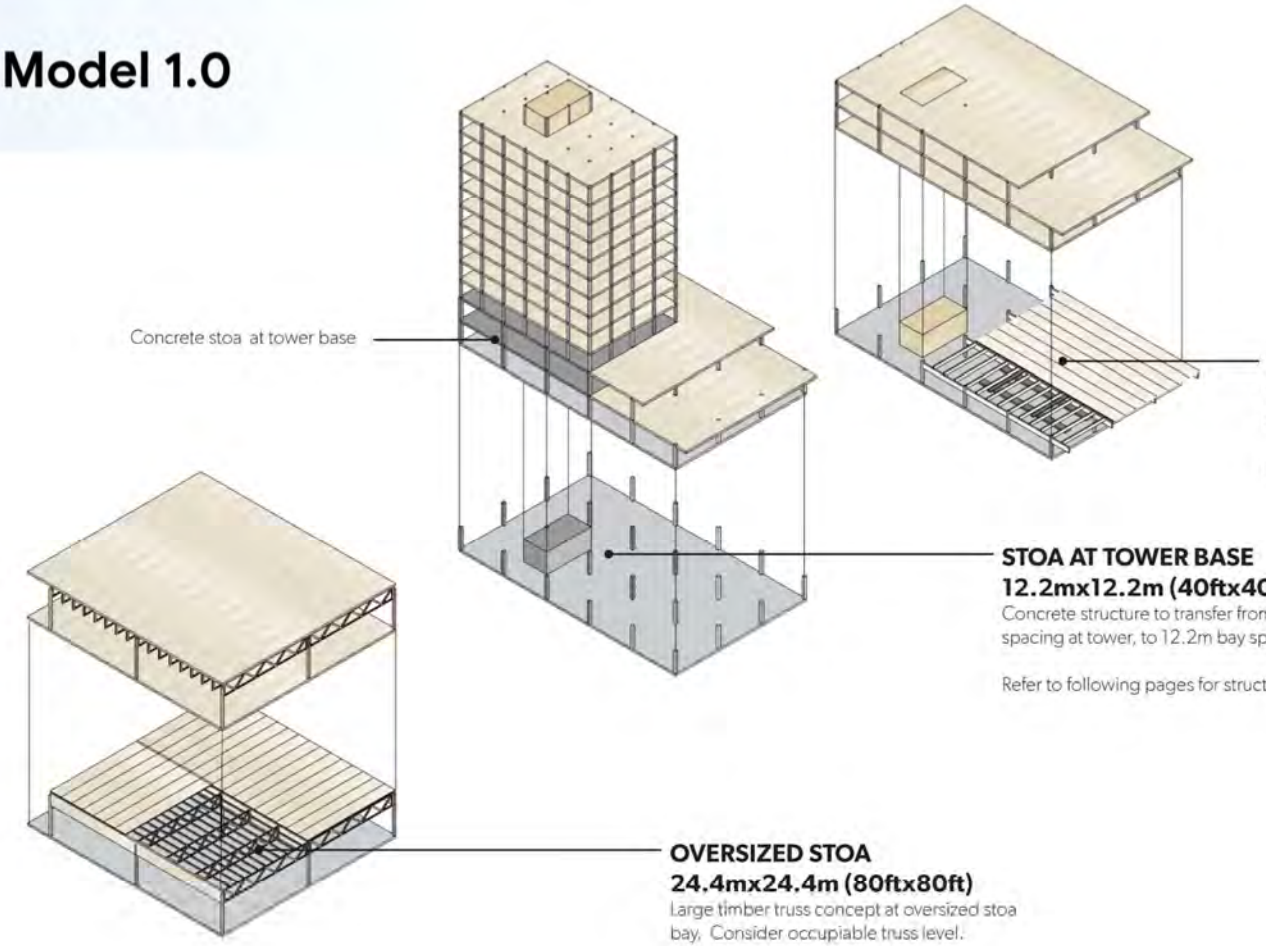
2019, Sidewalk Labs. Draft and Confidential. For Internal Discussion Only.

Proto Model 2.0



2019, Sidewalk Labs. Draft and Confidential. For Internal Discussion Only.

Proto Model 1.0



TYPICAL STOA
12.2mx12.2m (40ftx40ft)
CLT floor/deck on glulam frame.

Refer to following pages for structural concept

STOA AT TOWER BASE
12.2mx12.2m (40ftx40ft)
Concrete structure to transfer from 6.1m bay spacing at tower, to 12.2m bay spacing at stoa.

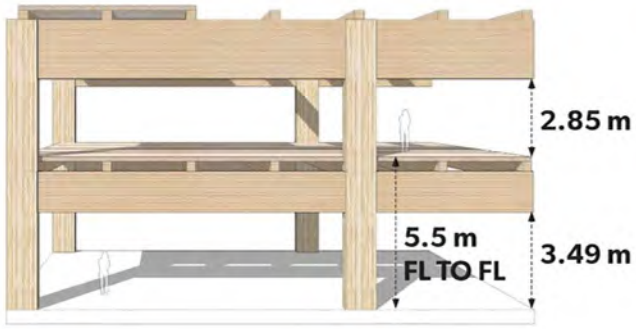
Refer to following pages for structural concept

OVERSIZED STOA
24.4mx24.4m (80ftx80ft)
Large timber truss concept at oversized stoa bay. Consider occupiable truss level.
~ 3m deep wood truss

Alternatively – 1.5m steel truss

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Proto Model 1.0 | Stoa 40ft x 40ft







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Potential of the Toolkit: Weather Mitigation

Jackman.

SIDE WALK LABS







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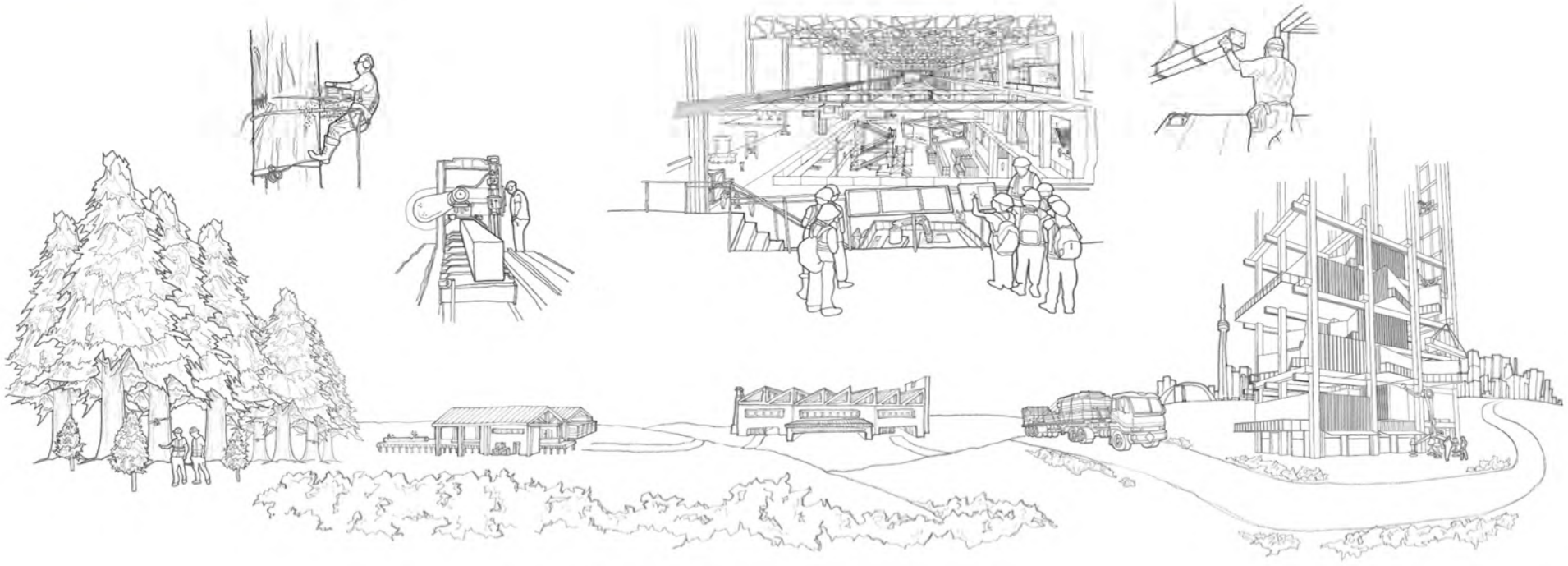

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Mass Timber
Factory & Supply Chain
2019, Sidewalk Labs. Draft and Confidential. For Internal Discussion Only.

Factory & Supply Chain - Enabled by an End to End Digital Platform

Canadian Production of CLT & Glulam

500K cubic meters per year

Quayside demand for CLT & Glulam 100K cubic meters

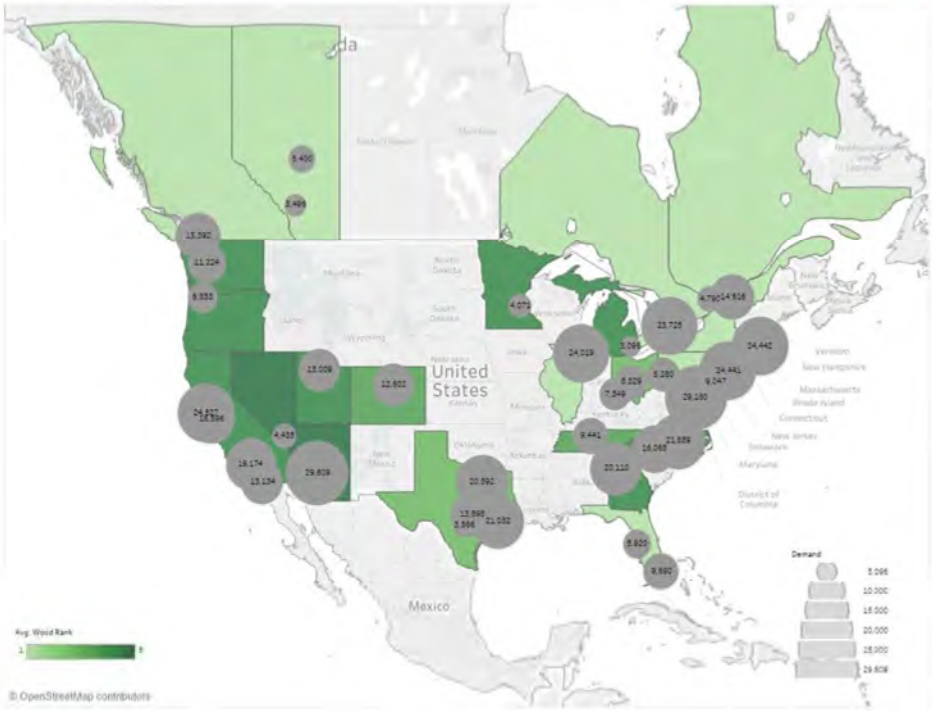


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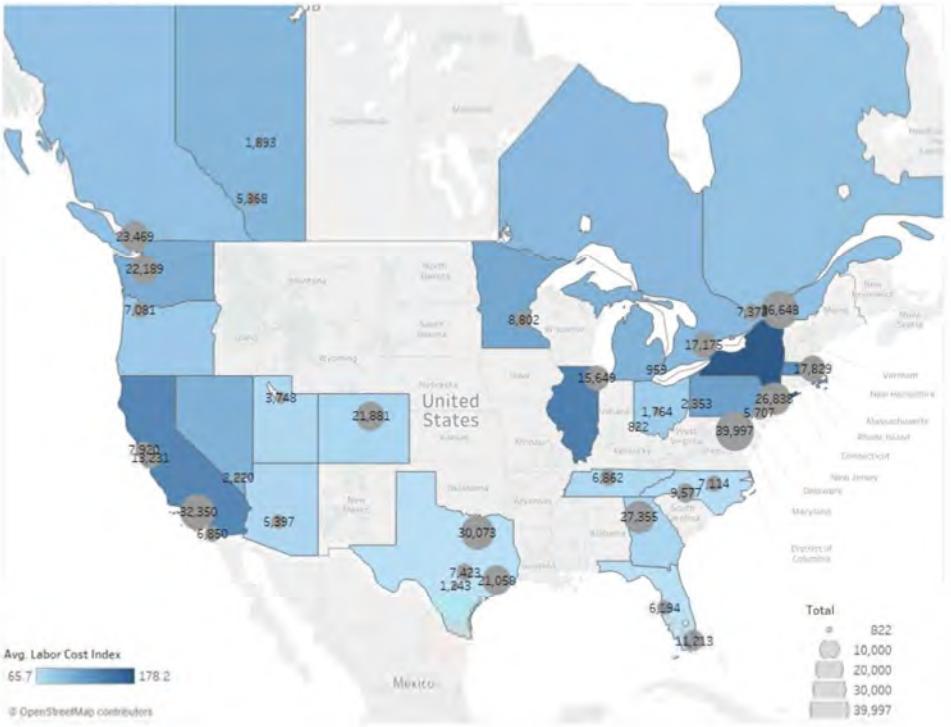
Commercial & Residential Demand for 5 - 29 Story Buildings

15-Year Horizon

Wood Friendliness and Demand for Office Space over a 15-year Horizon
(Demand in '000 sf)

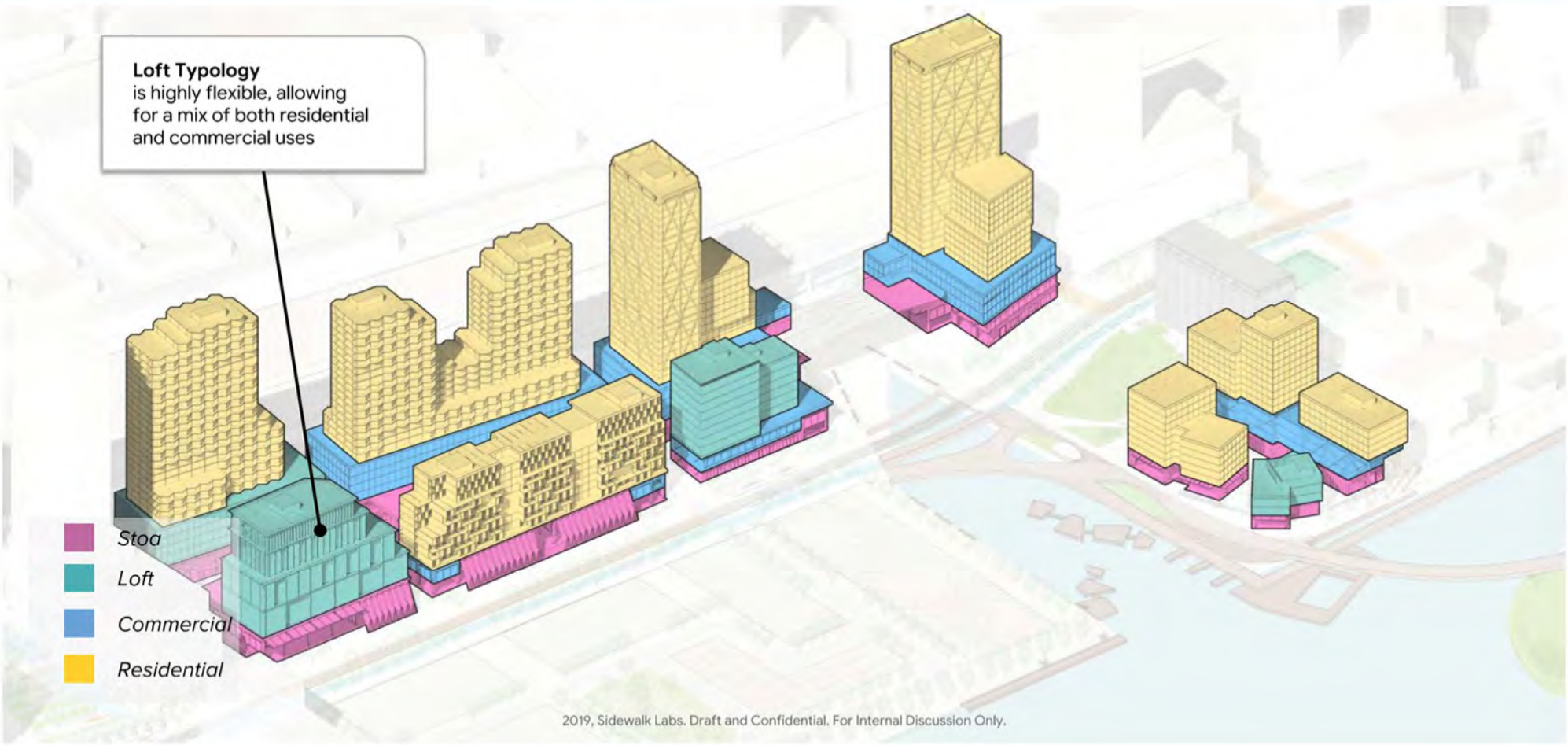


Construction Labor Costs and Multifamily Demand for 5 to 29 stories over a 15-year horizon
(Demand in '000 sf)



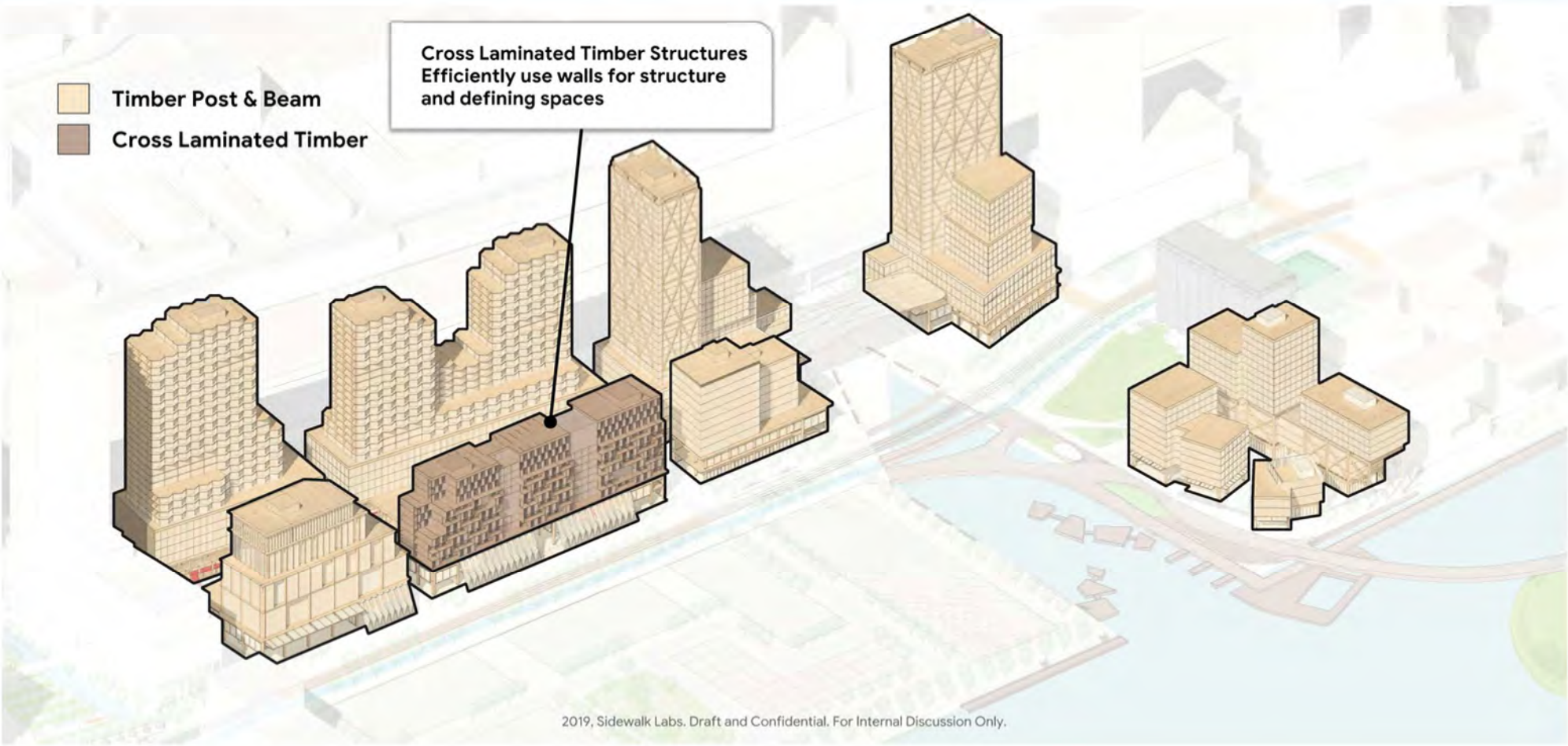
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Buildings Include Broad Mix of Uses



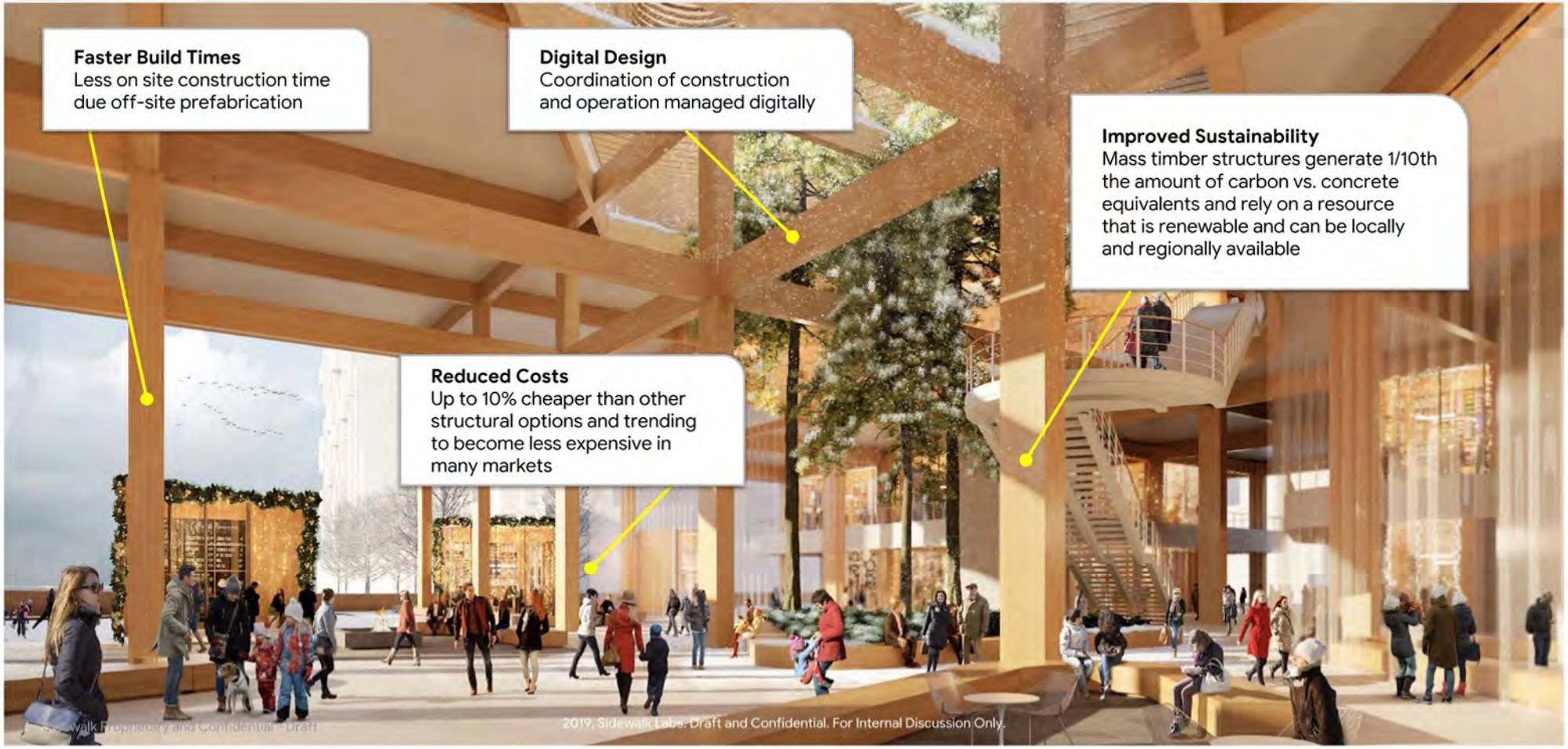
2019, Sidewalk Labs. Draft and Confidential. For Internal Discussion Only.

Potential of the Toolkit: Construction Type



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Buildings Are All Made with Mass Timber



Building: Use Mass Timber Toolkit



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Potential of the Toolkit: Architectural Explorations







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Buildings: All Parts Are Made Off-site, Resulting in Reduced Traffic Disruption

7x Less Trucking reduces City traffic and site disruption to Quayside neighbourhood.



13.9 km

Concrete
Distance in truck deliveries

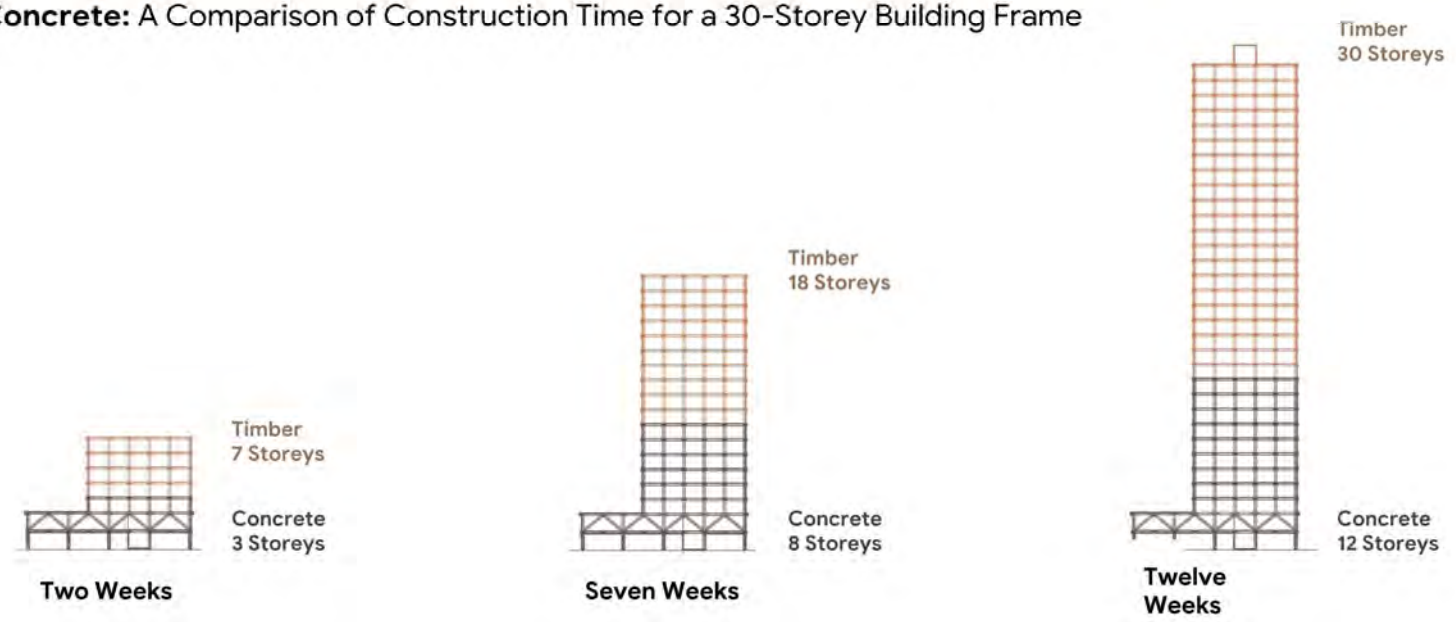
2.0 km

Timber 2.0
Distance in truck deliveries

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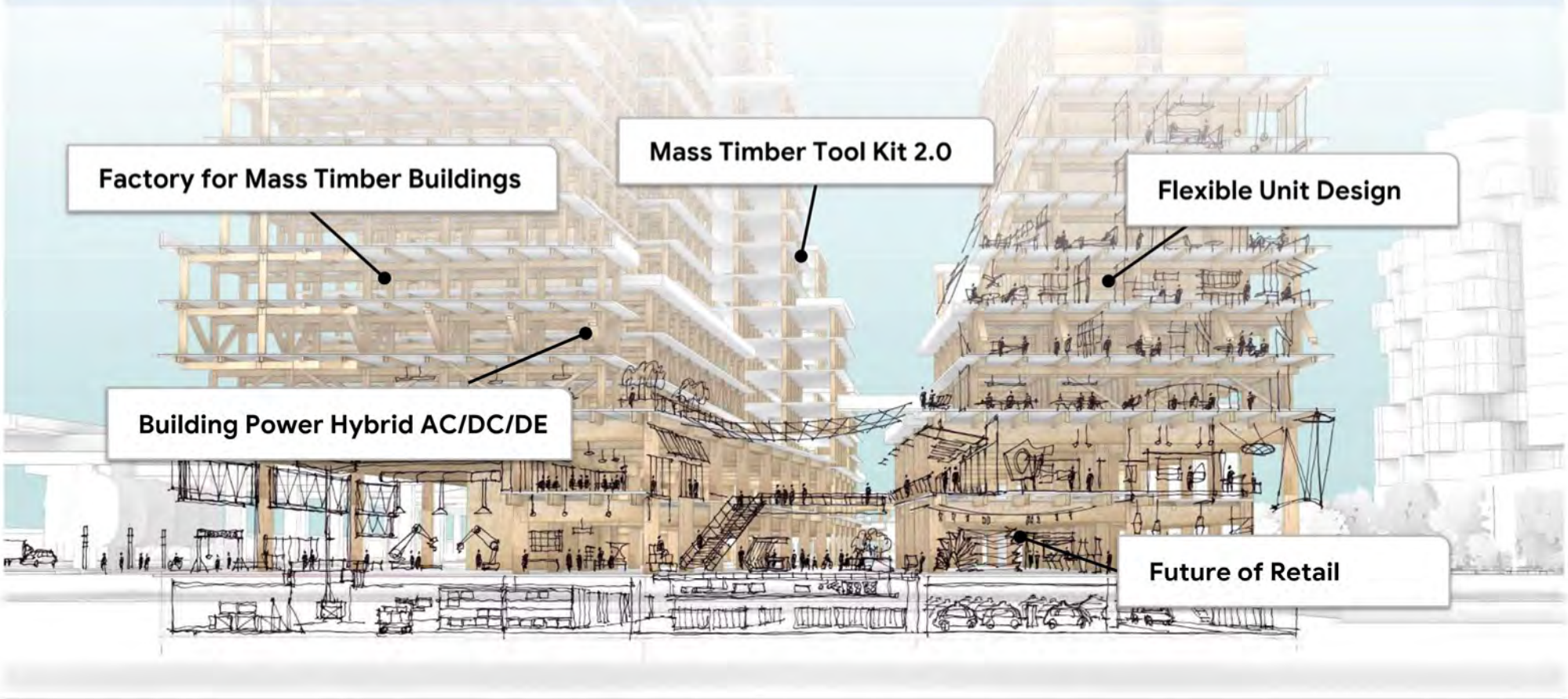
Buildings: Accelerated Construction Time Results in Saving 17 Weeks

Timber vs. Concrete: A Comparison of Construction Time for a 30-Storey Building Frame

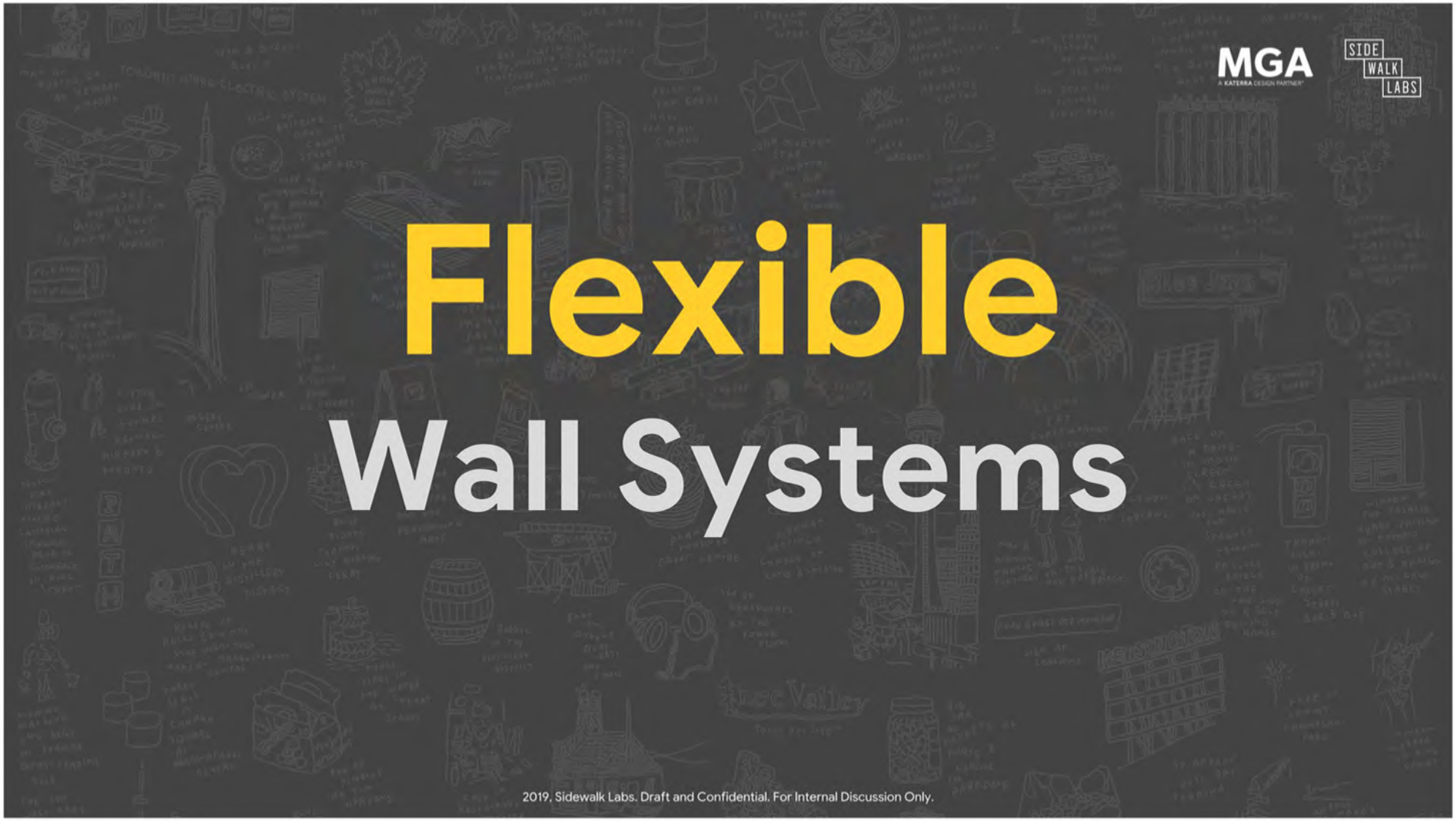




Buildings at Quayside – Discussion Topics



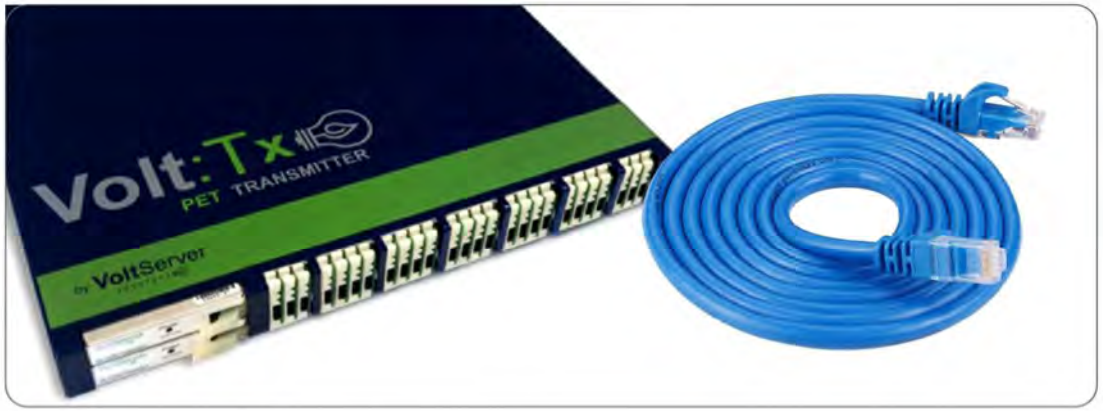
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MGA
A KATERRA DESIGN PARTNER
SIDE WALK LABS
Flexible
Wall Systems
2019, Sidewalk Labs. Draft and Confidential. For Internal Discussion Only.

What Is Digital Electricity (DE)?

- Electrical distribution using low voltage cabling without conduit instead of thicker, more costly armoured cable
- Addresses More Electrical Hazards: High Current, Ground Fault, Arc Fault, High Resistance, Touch
- Wiring can be run by data cablers, licensed electricians not required
- Simple to add new runs and move existing runs
- Eliminates most circuit breaker panels
- Control, monitoring, metering and fault monitoring & reset of individual circuits
- Policy based load shedding and demand response of individual circuits, dynamically adjustable





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Innovative Digital Electricity (DE) Uses

- Easier wiring of spaces through baseboards during construction and later
- USB-C power outlets throughout, in the future will carry 2,000 watts and power devices more efficiently by bypassing the AC to DC transformers that are in the vast majority of devices today
- Off site construction of power distribution closets
- Automated software control of lights and devices for comfort and cost savings
- Works with both new and legacy devices





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Mist Sprinkler System



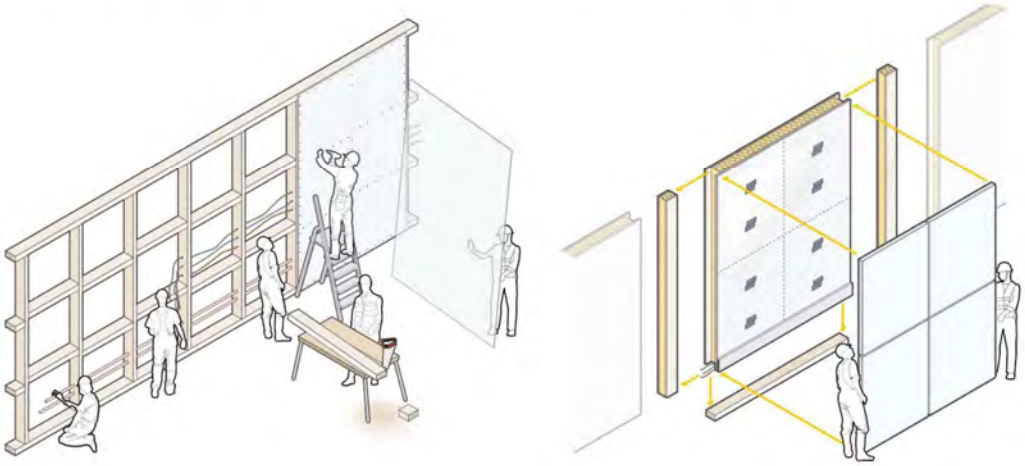
OLD: Fabric Fire Blanket

NEW: Mist Fire Blanket

Flexible Wall Systems in Stoa and Loft

Surface mounted utilities allow walls to be moved as single panels

- DC power is routed through baseboards
- Mist sprinkler tubing is hidden behind architectural channels at ceiling





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Jackman.
SIDE WALK LABS
Future of Retail &
Ground Floor Strategy
2019, Sidewalk Labs. Draft and Confidential. For Internal Discussion Only.

What's Standing in the Way?

Looking across industries within retail and f&b to understand pain points, we've discovered that there is undoubtedly a role for physical space, but many things stand in the way:

Launching →

- Lack of specialized knowledge about typical process
- High cost due to lack of relationships and scale
- Timelines for launch

Leasing →

- Onerous lease terms
- Inflexibility of physical space
- Insufficient space utilization

Operating →

- Education + retention of front line staff
- Efficient storage and movement of physical goods
- Integration of online/offline channels
- Store Operations
- Back office support

Learning →

- Capturing and managing customer data
- Transforming data into insight + action
- Lack of communication among retailers

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What Have We Learned?

Small Players

(start-ups, digital-only businesses, small shops)
want low cost of entry

- Easy and fast design and build out and space modification
- Turn-key operations so they can focus on their product and the customer
- Flexible, de-risked costing to reduce financial burden
- Access to assets/equipment without upfront capital expenditures
- Ability to quickly modify a space
- Ability to offer something competitive

Large Players

(multi-nationals, large regionals, and big brands)
want dynamic and accessible R&D

- The ability to adapt and learn quickly
- Customer engagement to gather insight and develop meaningful relationships
- An environment where failure is allowed and customers accept that it might not work perfectly

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SIDE WALK LABS
Efficient
Units
2019, Sidewalk Labs. Draft and Confidential. For Internal Discussion Only.

Affordability by Design

SIDEWALK LABS

1 **Design new typologies** that keep pace with shifting demographics and set new standards for efficient, sustainable lifestyles

2 **Lower cost of construction** through modular and other new building technologies

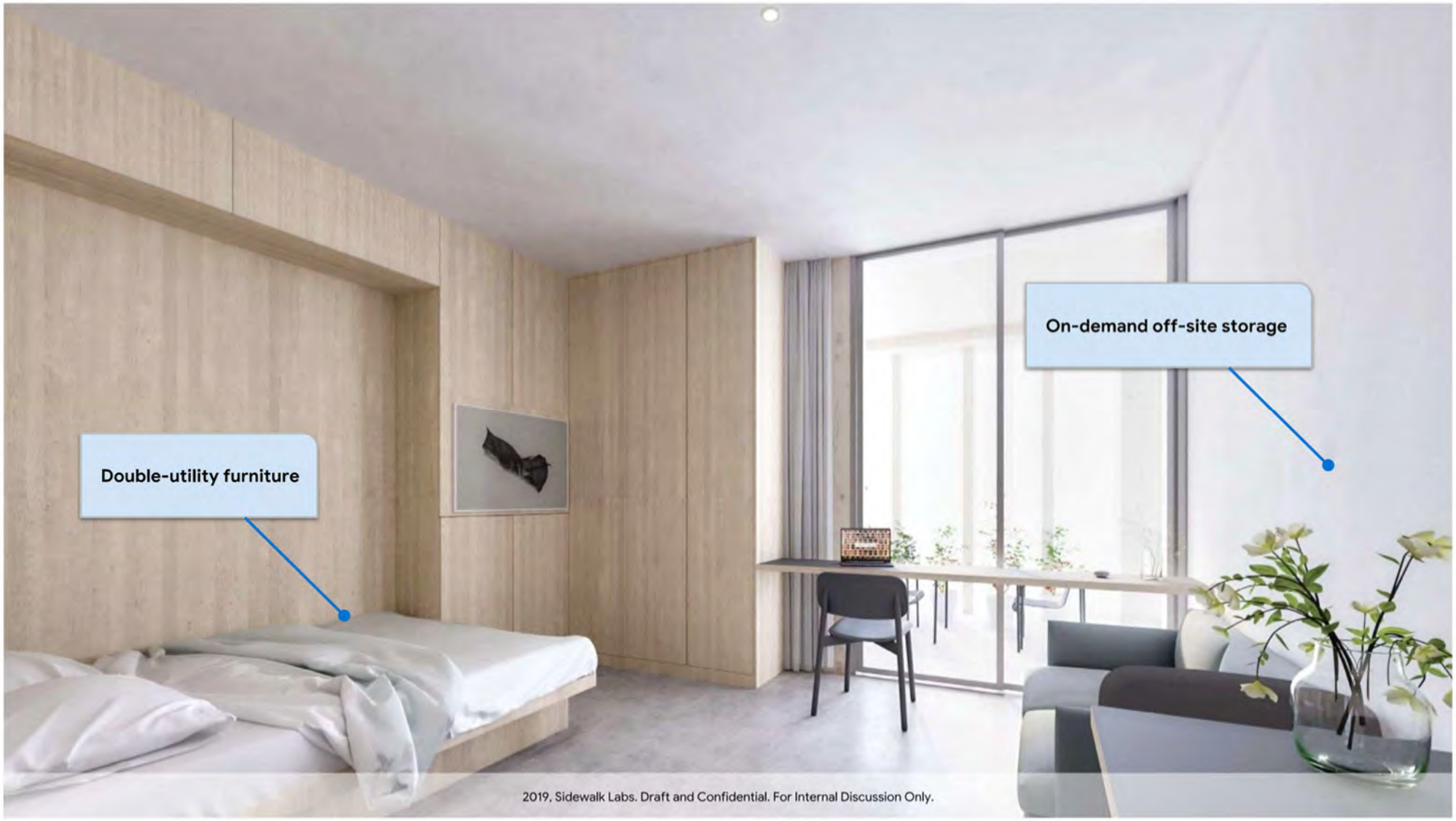
3 **Capture efficiencies** and pass on some value to residents through policy and/or financial innovation



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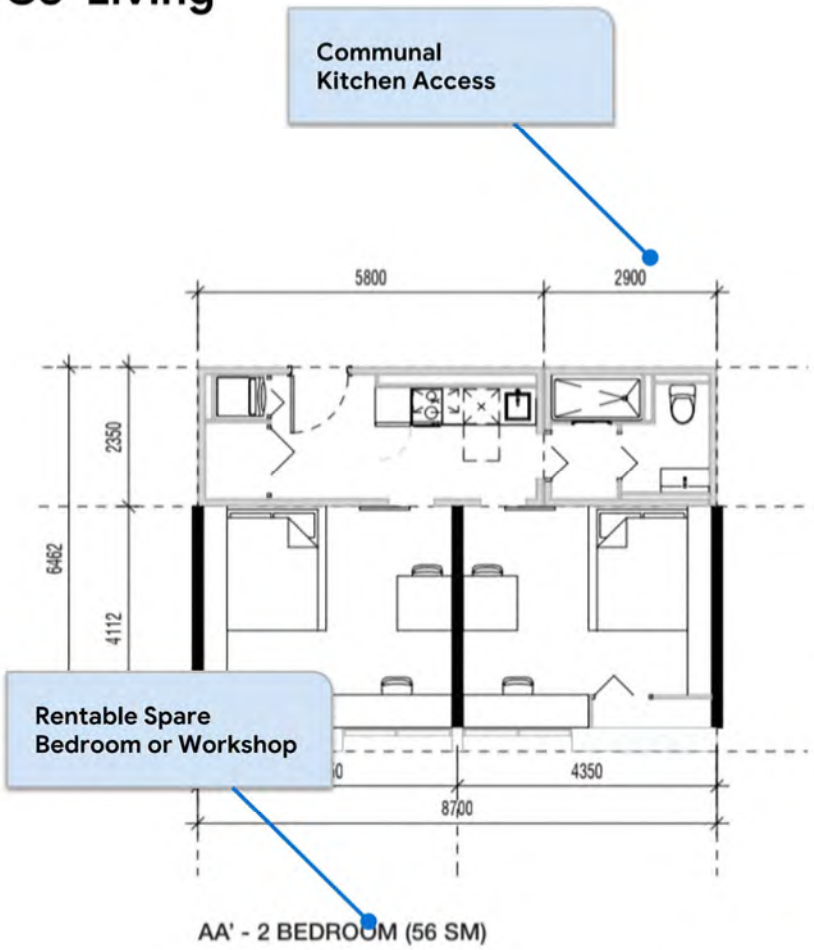


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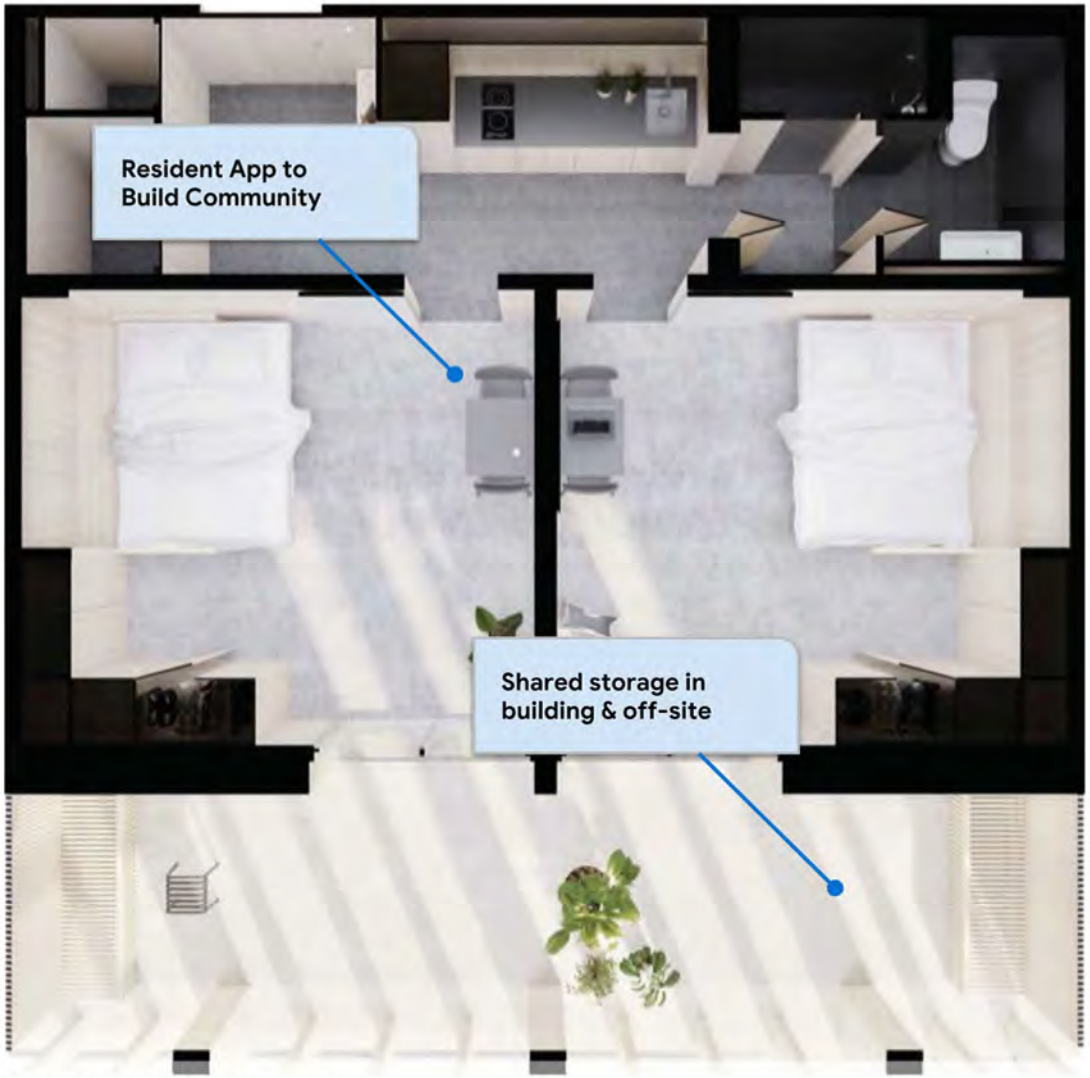

Double-utility furniture
On-demand off-site storage
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HOUSING UNIT DESIGN & TYPOLOGY

Co-Living



AA' - 2 BEDROOM (56 SM)



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Unit Plans: Home for a Student / Professional



A' - STUDIO (28 SM)



A home for a student or working professional



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Unit Plans: Student / Professional / Elderly / Couple



BB - 1 BEDROOM (37 SM)



A home for a student, working professional, elderly individual, or couple



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Unit Plans: Two Individuals, 1-Child Family, Couple



BBB - 2 BEDROOM (56 SM)

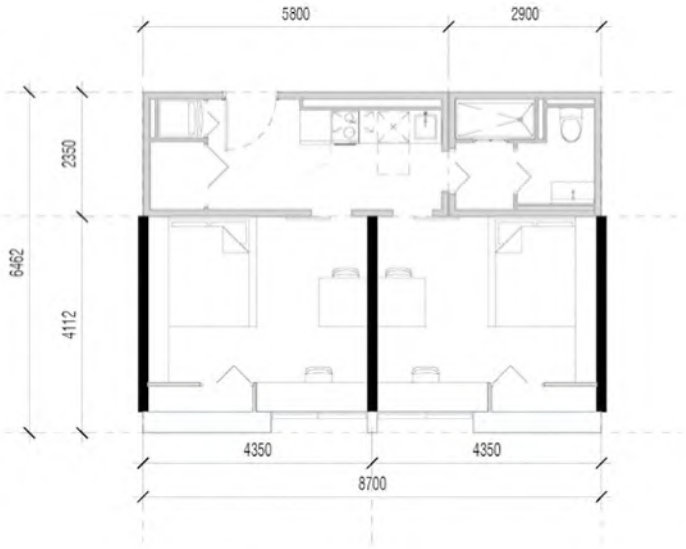




A home for two individuals, a 1-child family, or a couple

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Unit Plans: Larger Kitchen, Bathroom, W/D



AA' - 2 BEDROOM (56 SM)



A home with a larger kitchen, bathroom, and washer/dryer for two unrelated individuals



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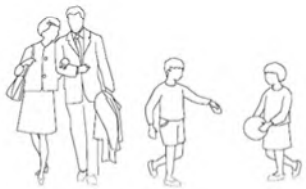
HOUSING UNIT DESIGN & TYPOLOGY

Unit Plans: 3 or 4-Person Nuclear Family



AA' B- 3 BEDROOM (75 SM)

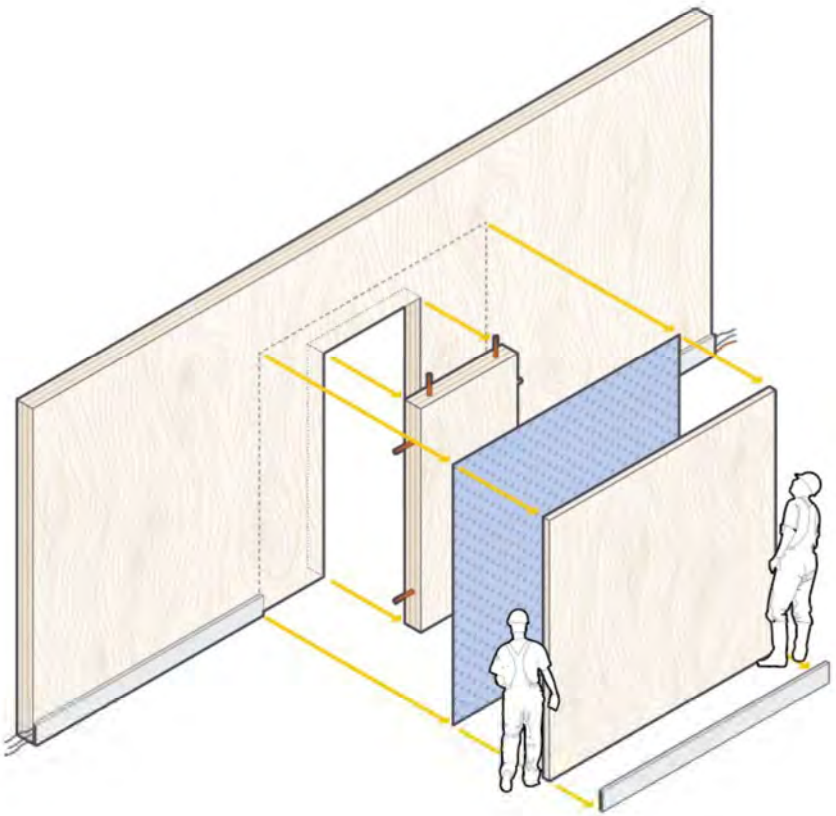


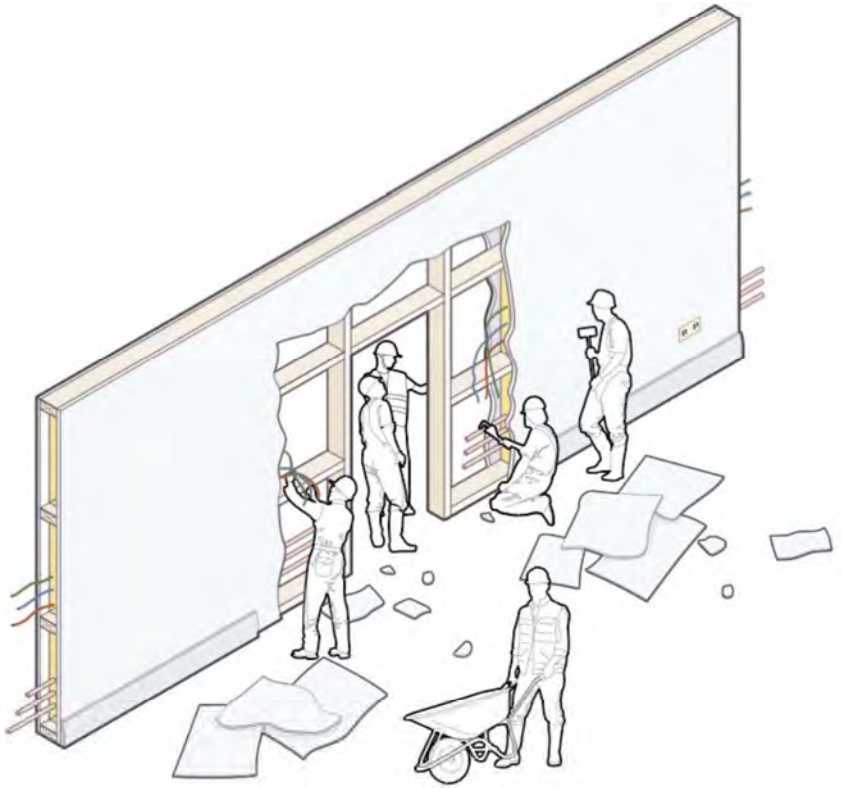


A home for a 3 or 4-person nuclear family

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Building: Flexible Walls (Residential)





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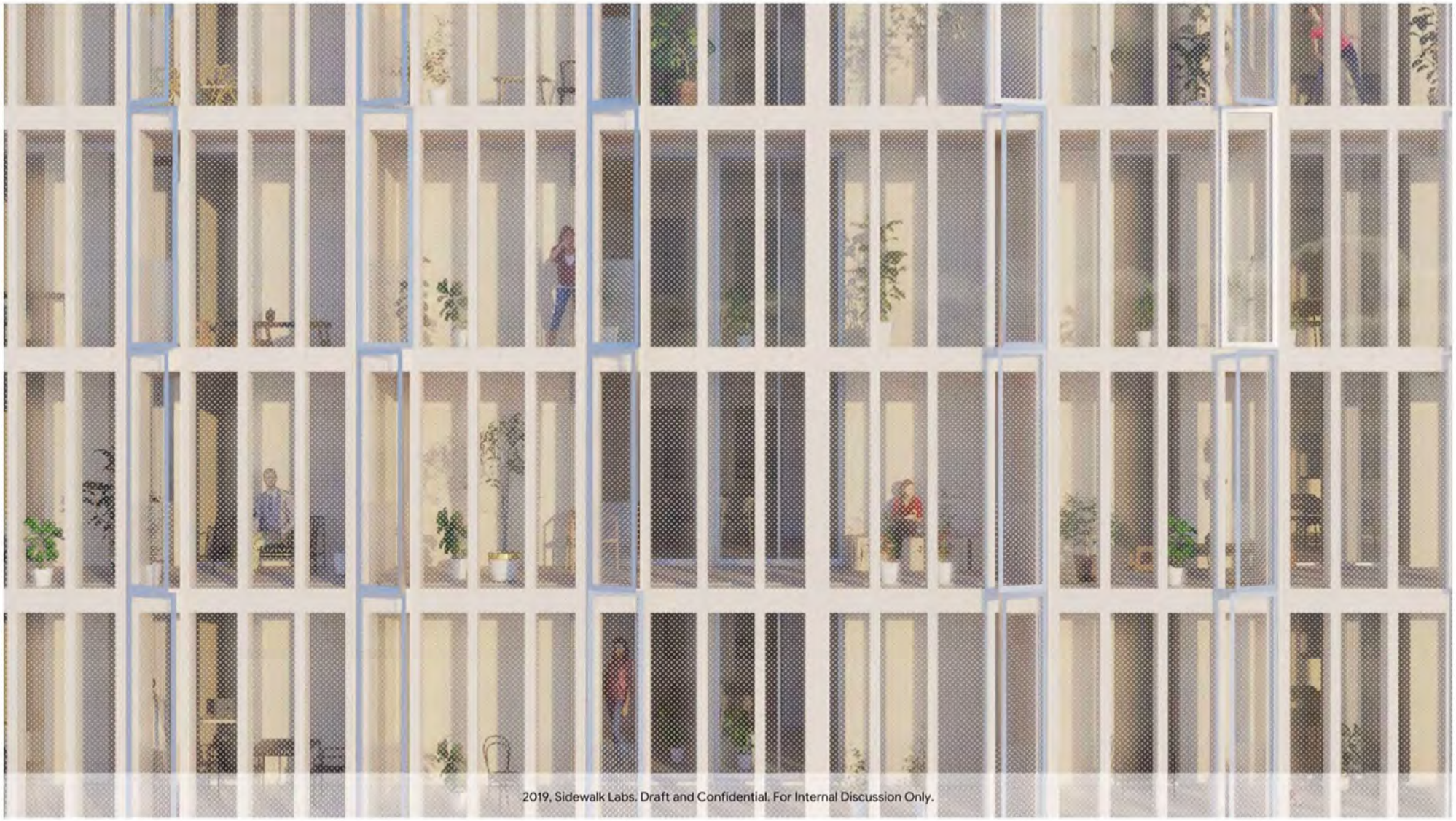

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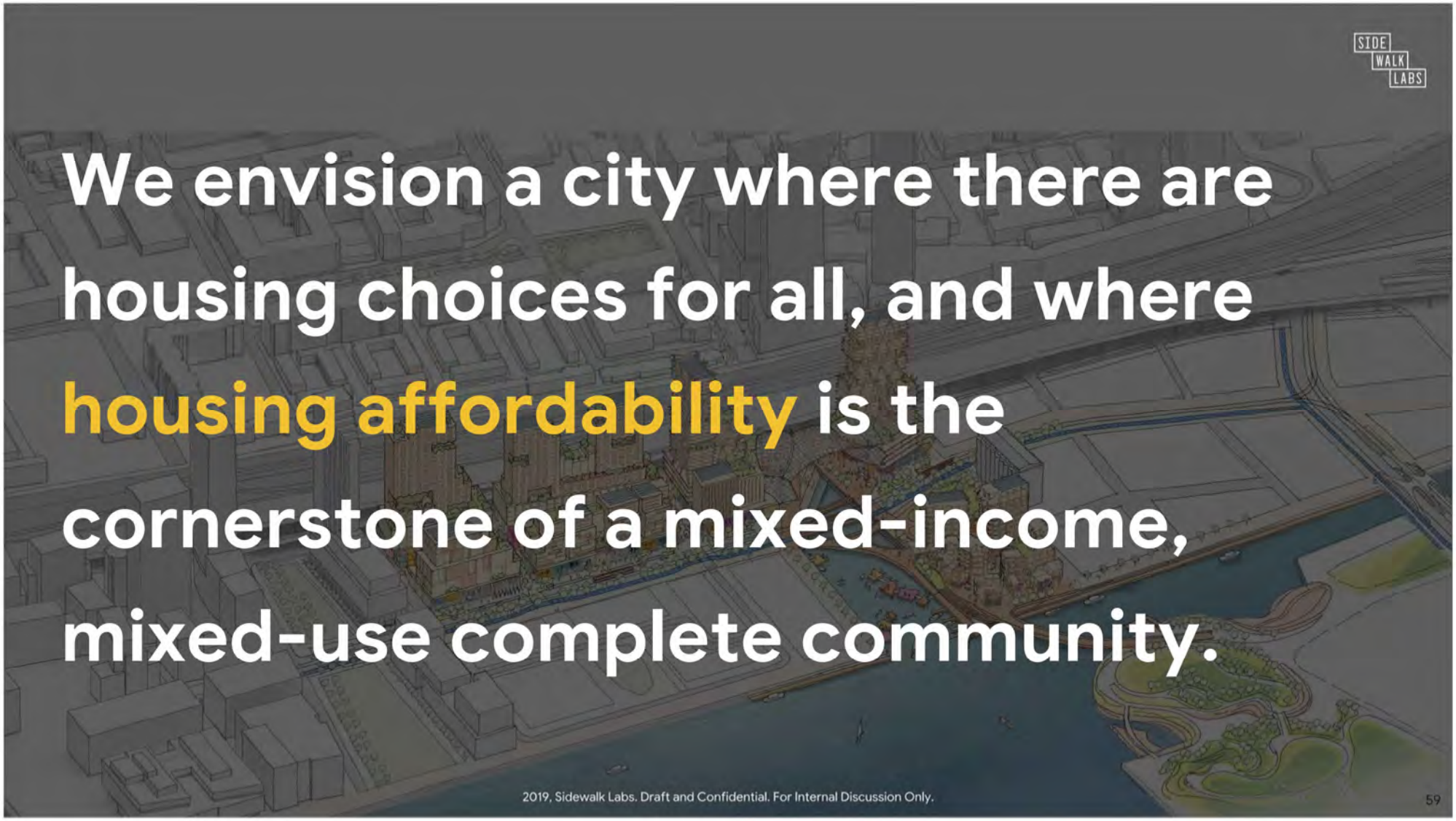
APPROACH

Building Innovation Touch Points

TYPE	Item	Technical Focus	CITY	PROV	FED
Mass Timber Buildings (Kit of Parts and Factory)	**Buildings up to 18 storeys when approved**	IBC is understood to approve in 2021. If approved how does Sidewalk Toronto coordinate with new code in Canada. Will Canada follow the same timing as IBC?		✔	✔
	Buildings up to 30 storeys	Provide alternative design solutions to provide strategies that approve these beyond code height timber buildings	✔		
	Shikkui Plaster for Fire Protection	This Cradle to Cradle (C2C) substance should achieve UL certification in 2019/2020. (Already passed the UL test sponsored by Sidewalk Labs).	✔	✔	
Flexible Wall Systems	**Movable Wall Systems**	Have a movable wall system for residential and retail reviewed and approved for use.	✔		
	Digital Electricity - DC Power	This non-code electrical system needs recognition as satisfying the electrification of a building.	✔		
	Mist Sprinkler Systems	This UL-approved system is currently not used widely.	✔		
Building Uses	**Normalize Performance Based Criteria**	Can we collapse some of the existing zone categories into a single performance based criteria category (i.e. noise, air quality, loading of structure, "over" occupancy)	✔		

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SIDE
WALK
LABS
Housing Affordability
JOHANNA GREENBAUM
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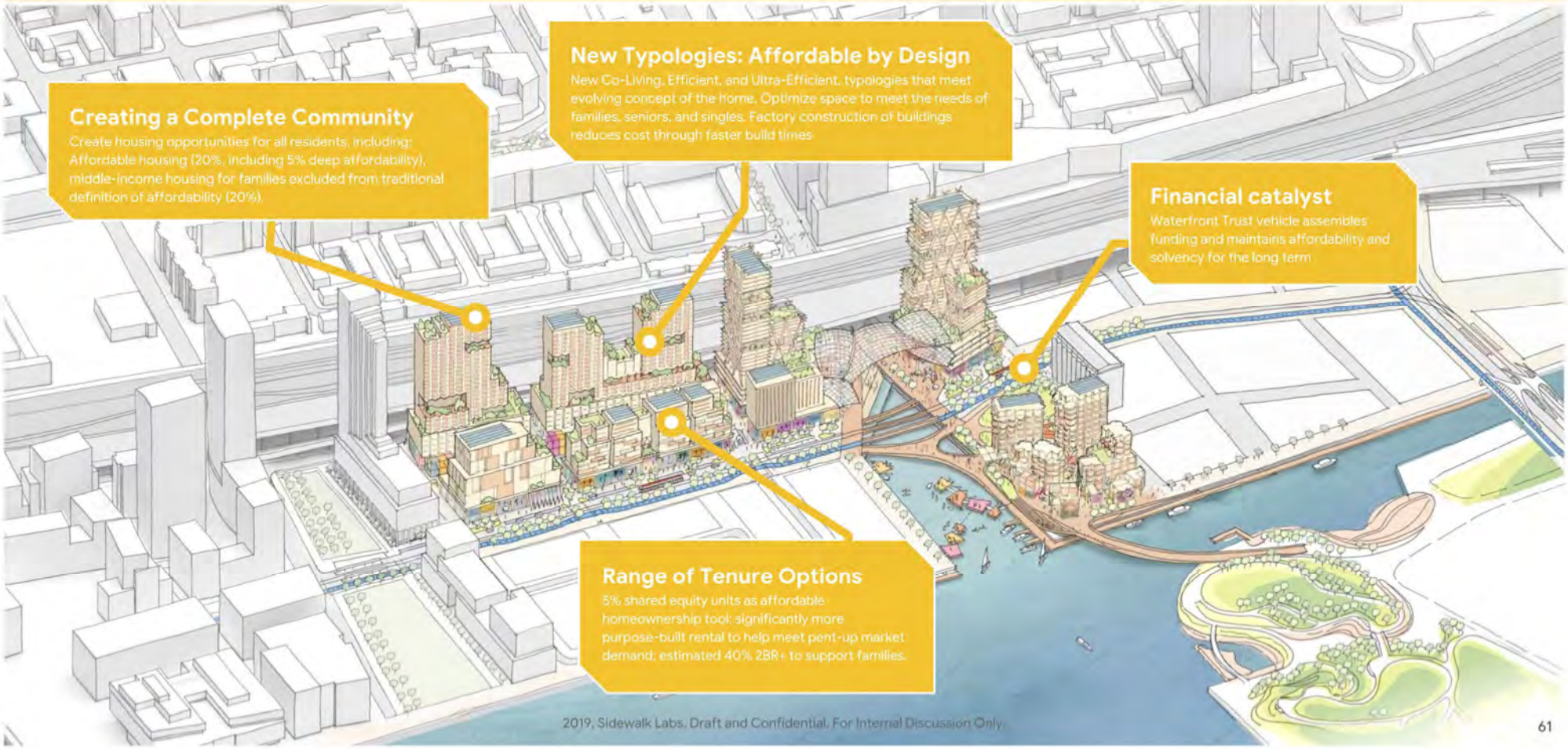

We envision a city where there are housing choices for all, and where housing affordability is the cornerstone of a mixed-income, mixed-use complete community.
2019, Sidewalk Labs. Draft and Confidential. For Internal Discussion Only.
59

Sidewalk Toronto objectives & guiding principles

Mixed-Income, Diverse	Commit to creating a mixed-income, diverse community
Scalable, Sustainable Test Bed	Serve as a global test bed to incubate scalable, sustainable change for housing affordability
New Options	Believe affordability also means meaningfully increasing choice in housing options for Torontonians
Specific to Toronto	Will respond specifically to unique Toronto market conditions
Not End-All Solution	Cannot single-handedly solve the local housing crisis, but can contribute to the creation of new solutions
Public & Non-Profit Partnership	Will partner with existing housing sector stakeholders, including all levels of government

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Quayside can be a testbed for the future of housing



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Toronto today faces an unprecedented housing affordability crisis

Record Growth
Toronto is projected to grow by 1 million people by 2041

More Singles, Seniors, Multi-generational
Single-person households now #1 type in Canada



Soaring Prices
Average home 9X median household income in Toronto

Record-low Vacancy
1% vacancy rate, below Montreal, NYC, Chicago, LA

Condos and Investors
76K condos built in last decade, compared to only ~2K rental units

Affordability Out of Reach
No mid-range programs to increase affordability for middle-class families

Funding Challenges
Lack of existing programs and partnerships to address affordability needs of households of all incomes

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The result is an increasingly income-stratified city...

Since the 1970's, Toronto has seen shrinking middle-class neighborhoods, low-income families pushed to the edges, and growth of high-income neighborhoods in the city center.

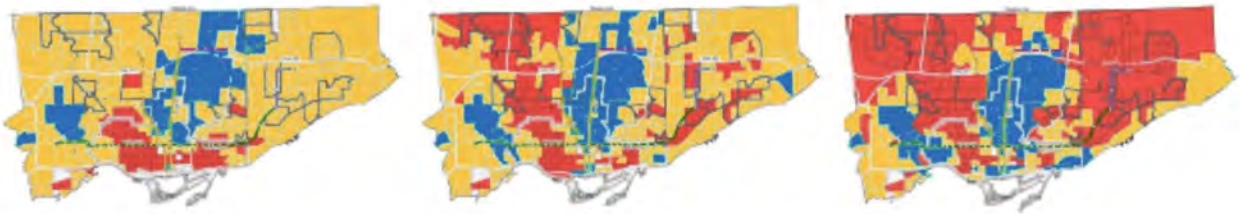
A city divided into "Three Cities" by income

Updated 2015, Hulchanski

Middle-income neighbourhoods have shrunk dramatically

Low Income neighborhoods have moved to city edges

High Income neighbourhoods are growing in centre



1975 1995 2015

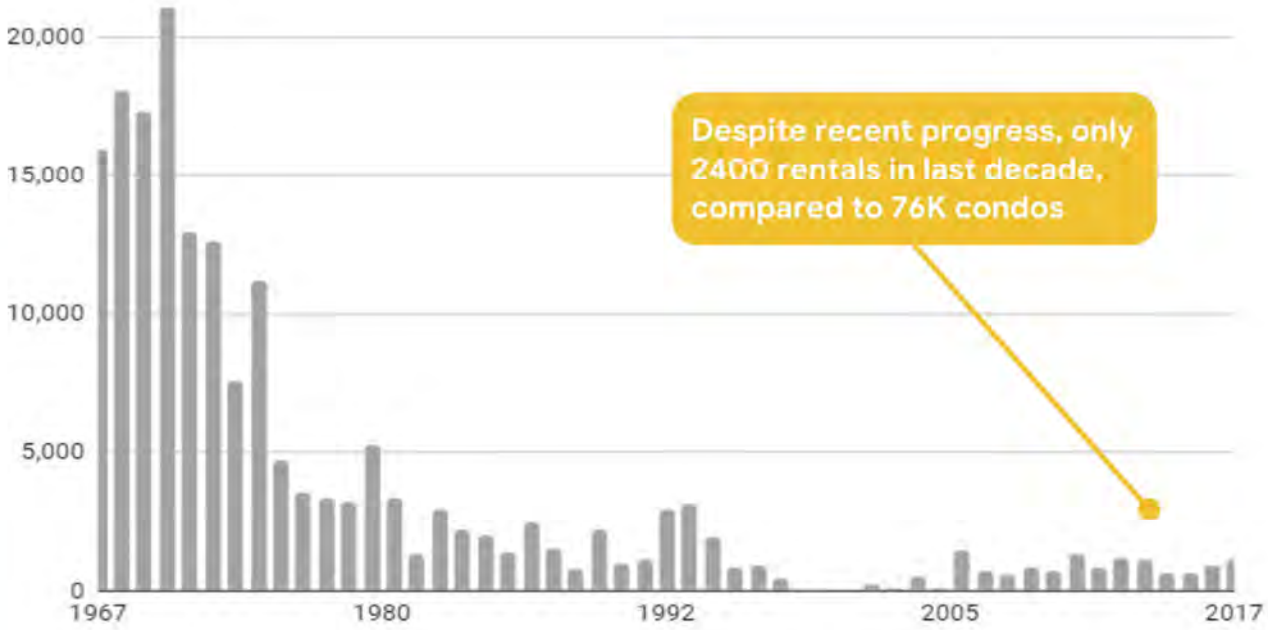
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...and an unhealthy housing ecosystem

Toronto has seen a precipitous decline in purpose-built rental housing. This imbalance has led to a purpose-built rental gap—even though half of Torontonian households rent, rental housing makes up less than a quarter of the overall supply.

Decline of demand purpose-built rental housing stock

City of Toronto, Purpose-Built Rental Units Completed by Year



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SWL proposes a comprehensive approach to housing affordability

Lowering Cost to Build



Leverage building technologies to lower the cost of construction and pass on some of the savings to residents

Rethinking How We Live



Redesign the home to create a more efficient, sustainable residential lifestyle

Developing New Financial Approaches



Create new mechanisms for financing affordable housing that will seed self-sustaining housing funding over the long term

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Our housing innovation toolkit for Toronto

SIDEWALK LABS

1	2	3	4	5	6
CREATION	CREATION	DELIVERY	DELIVERY	EXPERIENCE	EXPERIENCE
Purpose-built and affordable rentals	**Waterfront Housing Trust**	**Nonprofit collaboration**	**Shared Equity**	**New Typologies: Efficient Unit Design and Co-living**	**Affordable Housing Application**
Commitment to much-needed purpose-built and affordable rental housing in a market starved for rental units, aimed to be a testbed for future development	Creation of a new trust vehicle that assembles diverse housing funding sources, creates new oversight capabilities, and can incubate new housing finance tools at scale	New collaborative model between nonprofit housing and service providers in Toronto to deliver deep affordability tailored for households that need it most	An alternative tenure model of sharing ownership with an independent entity to increase housing attainability while maintaining some of the upside potential of owning	New typologies that maximize flexibility, efficiency, and community (co-living) to meet the evolving and shifting needs of families, singles, and seniors in Toronto	Digital affordable housing application and "one stop shop" to learn about housing opportunities, submit applications, get updates, and receive notifications

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PURPOSE-BUILT AND AFFORDABLE RENTALS

Our strategy in Toronto commits to 40% below-market housing

What We Propose

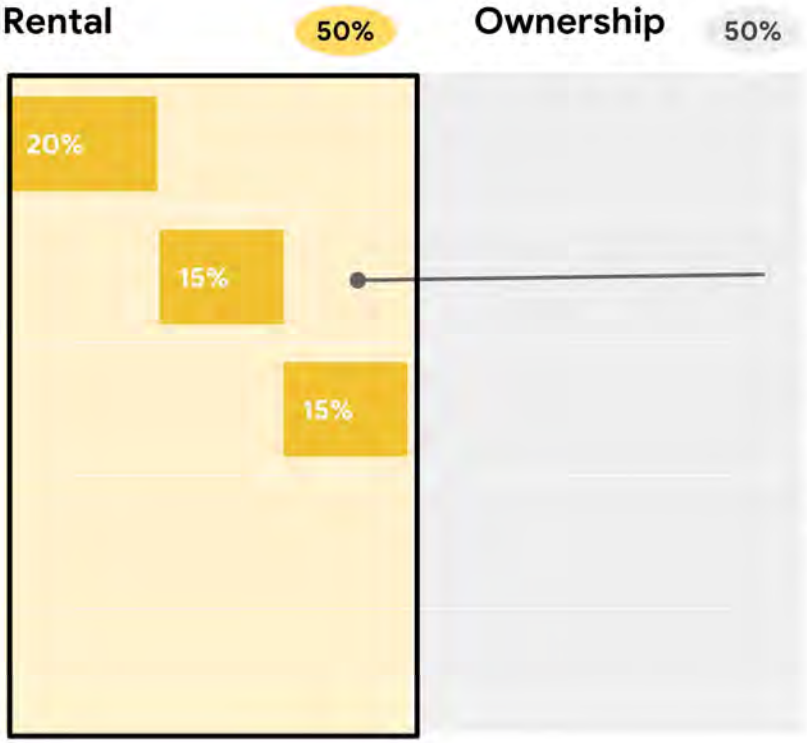
Affordable Rental
Less than 100% AMR

Mid-Range Rental
100-150% AMR

Market-Rate Rental

Shared Equity
Affordable ownership

Market-Rate Condo



50% Rental Housing, across a mixture of incomes

50% of the housing program at Quayside will be rental housing, which is seriously under supplied in Toronto. It is estimated that 8,000 units per year are needed to create a healthy housing ecosystem. This rental housing is also spread over a wide range of incomes, from deeply affordable to market rate.

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PURPOSE-BUILT AND AFFORDABLE RENTALS

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What We Propose

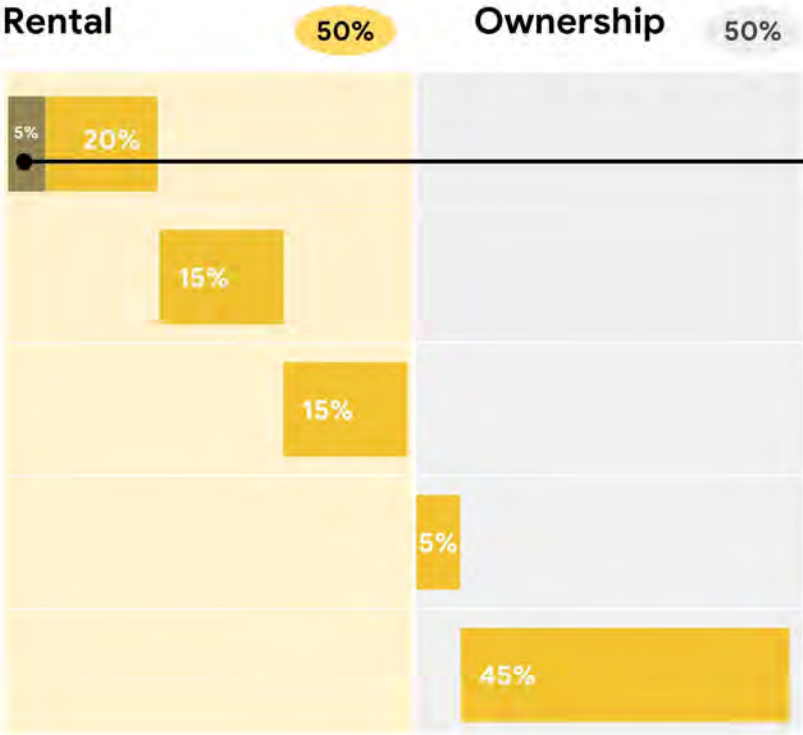
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Less than 100% AMR

Mid-Range Rental
100-150% AMR

Market-Rate Rental

Shared Equity
Affordable ownership

Market-Rate Condo



Includes deep affordability
Includes 5% deep affordable units for low-income residents, delivered with the support of experienced non-profit housing organizations

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PURPOSE-BUILT AND AFFORDABLE RENTALS

Our strategy in Toronto commits to 40% below-market housing

What We Propose

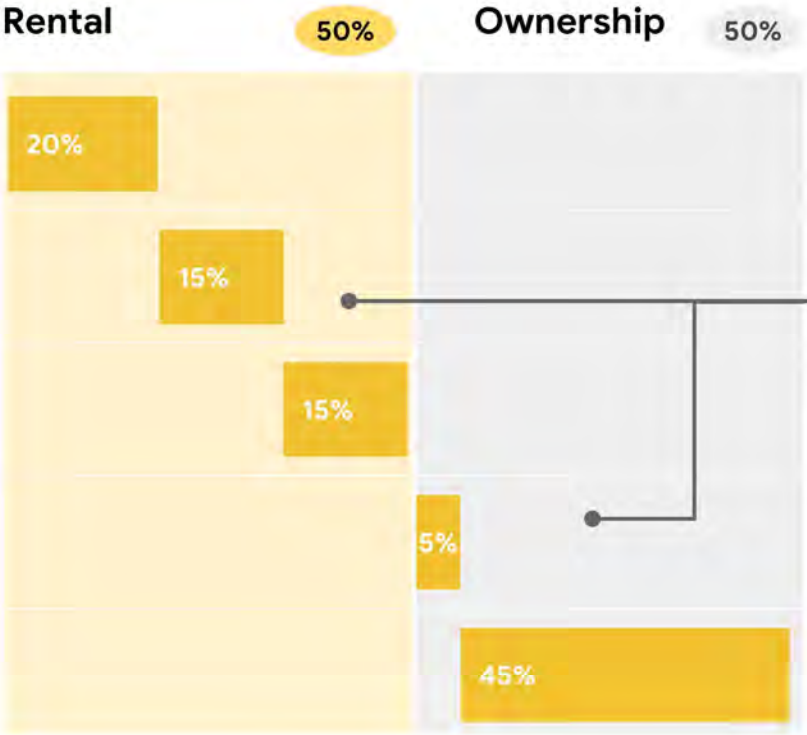
Affordable Rental
Less than 100% AMR

Mid-Range Rental
100-150% AMR

Market-Rate Rental

Shared Equity
Affordable ownership

Market-Rate Condo



Middle-income housing
Significantly more purpose-built rental, and up to 15% mid-range rental and 5% affordable home-ownership through shared equity for a total of 20% middle income

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PURPOSE-BUILT AND AFFORDABLE RENTALS

Our strategy in Toronto commits to 40% below-market housing

What We Propose

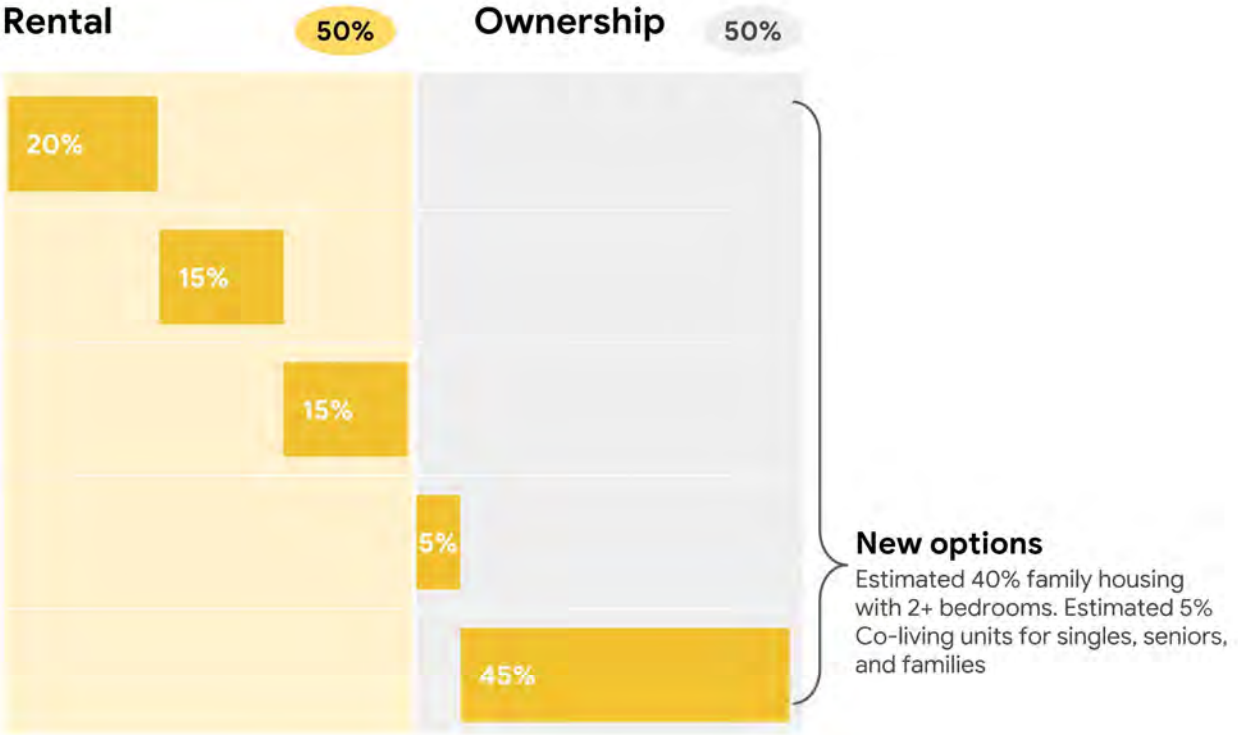
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Less than 100% AMR

Mid-Range Rental
100-150% AMR

Market-Rate Rental

Shared Equity
Affordable ownership

Market-Rate Condo



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Commitment to More Housing Options

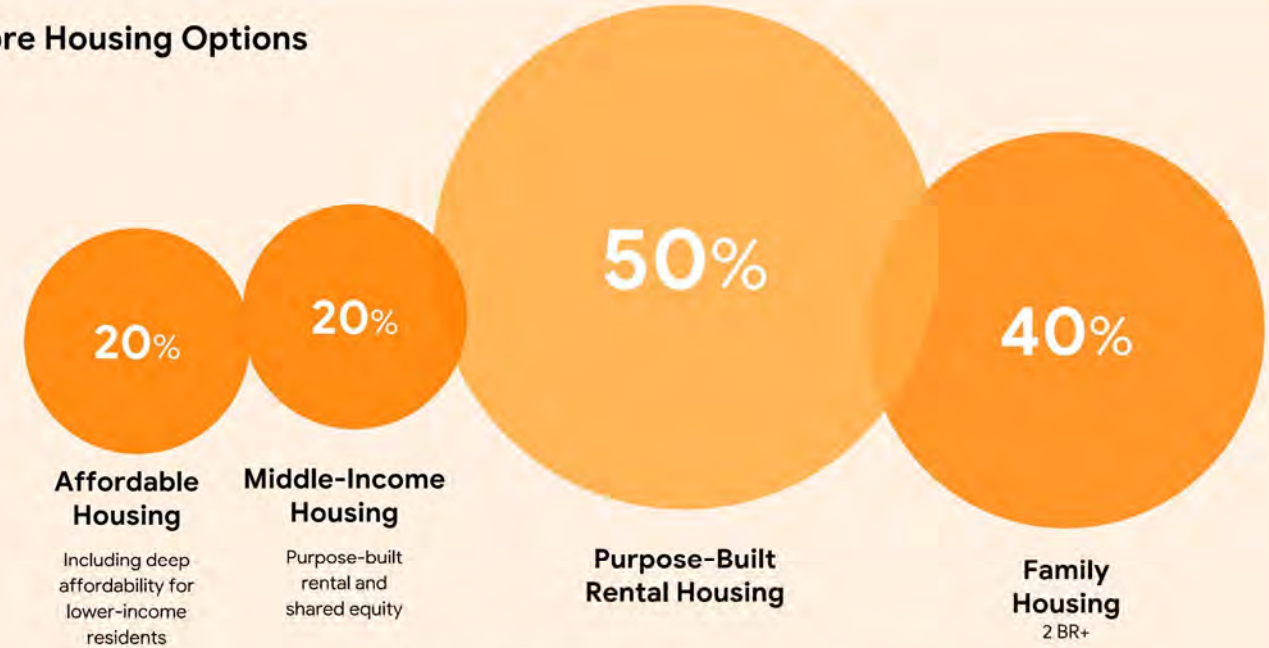
The Quayside affordable housing program mix will demonstrate a different approach and serve a much broader portion of the population.

More Affordability

40%

Below-Market Housing at Quayside

More Housing Options



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Concept of the home is changing dramatically

FOUR KEY DRIVERS









ORIGINAL RESEARCH ON HOUSING TYPOLOGIES

nARCHITECTS

nArchitects: Global architectural precedents and inspiration for housing innovation and efficiency

OCAD UNIVERSITY

OCAD Small Grants Research: Global housing typology innovation and application to local Toronto

Ryerson University | Ryerson City Building Institute

Ryerson "Re-thinking the Tower": Market scan and case examples of housing typologies relevant for Toronto

SIDEWALK TORONTO

SWTO Family Lifestyles: Ethnographic research with Toronto families on residential living

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EFFICIENT UNITS AND CO-LIVING

Concept of the home is changing dramatically

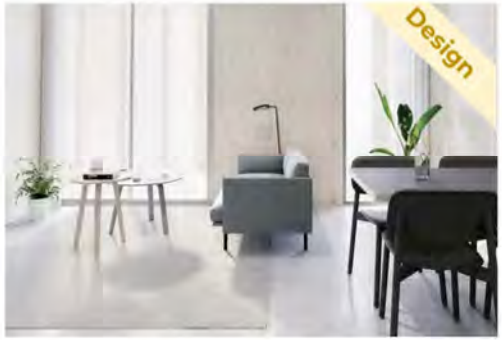
	More singles...	More seniors...	More multigenerational...
Global	47% Adults living alone in Sweden	20% Urban growth in United States attributed to Boomers in rental market	↑47% Growth rate of multigenerational households in the UK since 2015
Toronto	62% Households in Toronto that are single- or double-person	16% Toronto citizens who are 65+ years old, outpacing under-15 age group	↑40% Growth rate of multigenerational households in Toronto CMA since 2001[1]

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EFFICIENT UNITS AND CO-LIVING

Sidewalk Toronto envisions the next horizon of typologies

EFFICIENT UNIT



Smaller units at a range of household types (not just 1-2 people) that allow for densification and efficient construction

ULTRA-EFFICIENT UNIT



Units that maximize spatial efficiency even further beyond efficient units

CO-LIVING



Communal housing type that pairs shared amenities with efficient units to enhance community for singles, seniors, and families

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Our housing innovation toolkit for Toronto

SIDEWALK LABS

1	2	3	4	5	6
CREATION	CREATION	DELIVERY	DELIVERY	EXPERIENCE	EXPERIENCE
Purpose-built and affordable rentals	**Waterfront Housing Trust**	**Nonprofit collaboration**	**Shared Equity**	**New Typologies: Efficient Unit Design and Co-living**	**Affordable Housing Application**
Commitment to much-needed purpose-built and affordable rental housing in a market starved for rental units, aimed to be a testbed for future development	Creation of a new trust vehicle that assembles diverse housing funding sources, creates new oversight capabilities, and can incubate new housing finance tools at scale	New collaborative model between nonprofit housing and service providers in Toronto to deliver deep affordability tailored for households that need it most	An alternative tenure model of sharing ownership with an independent entity to increase housing attainability while maintaining some of the upside potential of owning	New typologies that maximize flexibility, efficiency, and community (co-living) to meet the evolving and shifting needs of families, singles, and seniors in Toronto	Digital affordable housing application and "one stop shop" to learn about housing opportunities, submit applications, get updates, and receive notifications

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Non-profit Collaborative: Prioritized partnering + learning from local nonprofits

SIDEWALK LABS

ENGAGING NONPROFIT COMMUNITY

- **Co-convened roundtable** with United Way of Greater Toronto on September 5, 2019
- **Hosted 17 nonprofit leaders** to understand what contributes to success (or failure) of integrating nonprofit affordable housing into community

WHAT PARTICIPANTS TOLD US SUCCESS LOOKS LIKE

> ...There is early and ongoing relationship-making and design input

> ...There is economy of scale on units to effectively deliver crucial support services

> ...Support and professional property management is appropriately tailored for population needs

> ...We don't reinvent the wheel—and work with existing players with deep knowledge

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Together we envision a new, inclusive proposal process

PARTNERING WITH NONPROFITS

- Toronto nonprofits play a critical role in delivering affordable housing
- Sidewalk Toronto seeks to partner with nonprofits to deliver deep affordable housing for low-income households
- We envision a new proposal process exclusive to nonprofits that invites them in at the earliest stages

HOW IT MIGHT WORK



- **Nonprofits invited to submit letters of interest** for participation in the project
- **It is possible to express interest without burdening their budgets** with costs in response to an uncertain RFP

- **Interested nonprofits join project consortium** and are invited to participate in design charrettes
- **They help the project meet the housing needs** of specific populations

- **Operating partner(s) are selected** through a transparent evaluation process
- **Evaluation criteria designed to reward joint applications** that serve diverse "deep affordability" populations

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AFFORDABLE HOUSING APPLICATION

Reimagining the process of applying for affordable housing

SIDEWALK LABS

CURRENT STATE

- **Decentralized:** affordable housing applicants required to submit multiple applications
- **Opaque:** Lack of clarity on timing or likelihood of "winning", particularly for social housing applicants who wait 8-10 years on average
- **Complex:** required to submit lengthy documentation

PAIN POINTS ALONG RESIDENT JOURNEY TODAY

1 Learn about housing opportunities

- Private, NFP developer affordable options not transparent and decentralized by developer, operator—no central list available
- Alternative provider options not user-friendly—PDF online

2 Submit an application

- Manual updates required annually for Housing Connections
- Applications for affordable housing vary widely by developer, operator—require unique processes
- Overbidding, long lines, bribery common in competitive market-rate applications

3 Get updates

- No sense of timing or transparency on social housing applications
- Subjective selection process for market-rate applicants

4 Receive notification of acceptance

- No way to prepare for move if accepted to social housing

Journey map key

- Social housing waitlist
- Alternative / non-profit waitlist
- Affordable housing random selection
- Market rental housing

What could a future vision look like?

COMMON HOUSING APPLICATION



"One stop shop"

All Quayside and other available housing listings, with tailored recommendations based on a resident's unique income profile

Ease of application

Save required financial and eligibility requirements into profile and apply to as many housing options as you want

Transparent process

Know where you are in line, likelihood of "winning", and expectations for random selection timing. Get notified of new units as soon as they are available, or apply to upgrade unit

SHARED EQUITY

Shared equity could be a model for affordable homeownership

THE CHALLENGE

- **Families getting crowded out.** Renters are 3X more likely than owners to live in unsuitable housing
- **Home prices outpacing ability to save.** At least 10 years to save for a 10% down payment on a median-priced home
- **Harder to reach homeownership.** 47% of CMA residents aged 20-34 live with their parents

EXAMPLE SHARED EQUITY MODELS



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SHARED EQUITY

Potential shared ownership model falls between renting and owning

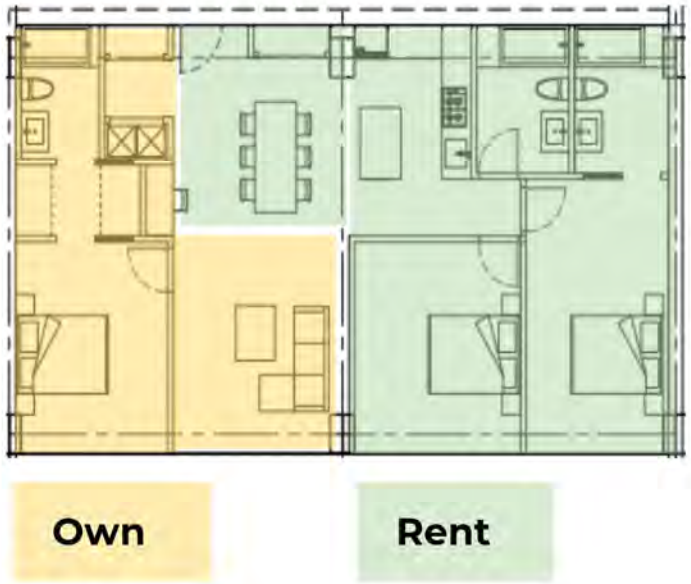
SIDEWALK LABS

CASE EXAMPLE

UK HELP TO BUY

- **Shared ownership model** whereby nonprofit housing associations share ownership with first-time homebuyer
- **New owner pays both mortgage payments and rent** (on the portion they do not own)
- **Allows "staircasing"** to purchase more equity over time

HOW IT MIGHT WORK



Own what you can afford and rent the rest

- Put as little as 3-5% down on a home, proportional to what you own
- Pay rent on the remainder
- Total monthly payments are competitive with market rents on a similar unit
- Build equity on the part you own - upon resale, appreciation capped to that level

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SHARED EQUITY

Singles, couples, or families with children could all benefit

HOW IT COMPARES

- **Down payment assistance programs.** Offered through Canada-Ontario Investment in Affordable Housing Program (IAH); Toronto Home Ownership Assistance Program (HOAP)
- **Shared appreciation loans.** Second mortgage models from Options for Homes, Artscape, Trillium, etc.

EXAMPLE RESIDENT ECONOMICS

			Traditional ownership	Shared ownership
Single or couple	• 1 Bedroom unit • $550,000 CAD • Limited by cost of down payment	% OF HOME OWNED	100% (10% down)	30% (10% down)
		DOWN PAYMENT[1]	$55,000	$16,500
		MONTHLY COST[2]	$2,600	$2,260
Family w/ children	• 3 Bedroom unit • $900,000 CAD • Interested in "staircasing" equity over time	% OF HOME OWNED	100% (20% down)	10% (15% down)
		DOWN PAYMENT[1]	$180,000	$13,500
		MONTHLY COST[2]	$3,780	$3,600

$74K at Y5

Partial ownership...

...in exchange for lower down payment and comparable monthly payments

...with upside potential on resale

[1] Before transaction fees
[2] Numbers rounded for simplicity

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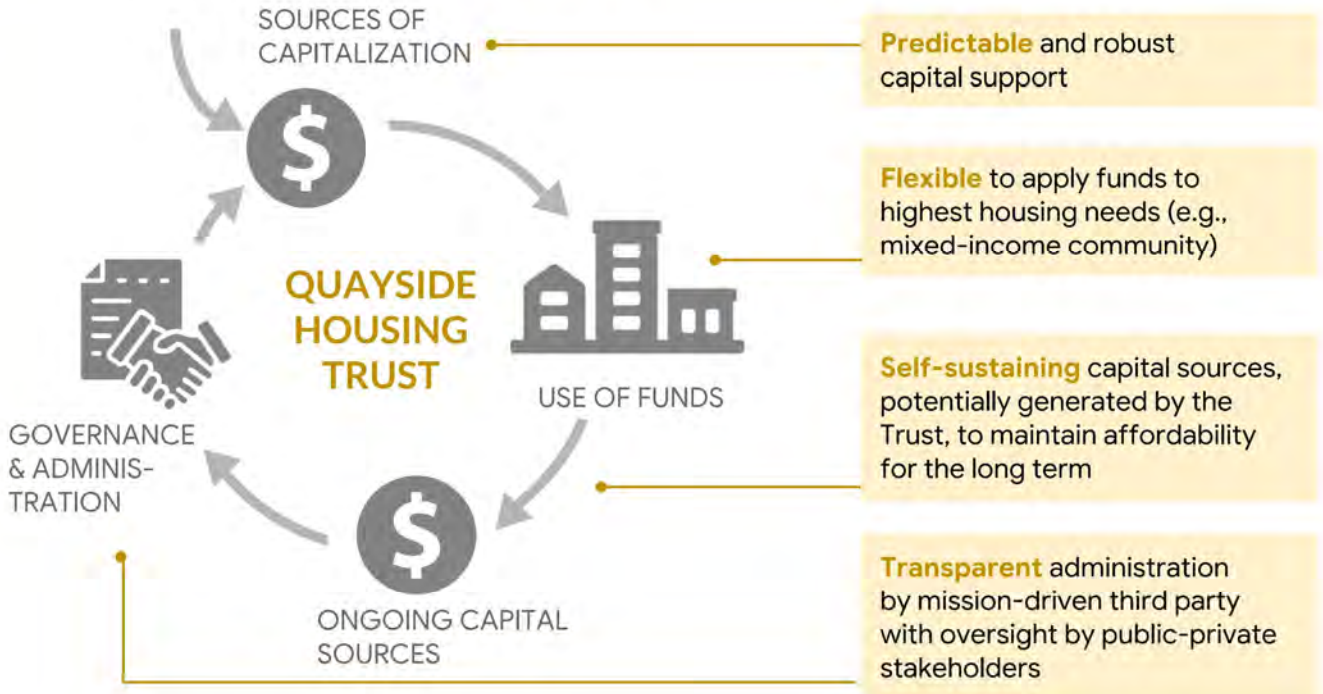
WATERFRONT HOUSING TRUST

A new trust vehicle can be a financial catalyst and steward of funds

OVERVIEW

- **Waterfront Housing Trust is a new mechanism** to fund and administer mixed-income, affordable rental housing
- **An innovative public-private partnership** that serves as an intermediary between private and non-profit organizations, financial institutions, and government entities

KEY FEATURES OF WATERFRONT HOUSING TRUST



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WATERFRONT HOUSING TRUST

Trust can address several challenges today

CHALLENGES TODAY

- **Government funding is negotiated on a deal-by-deal basis,** hampering ability of affordable housing developers to make acquisitions knowing in advance that subsidies will be available
- **Subsidies are tied to specific and often narrow income bands** that do not necessarily align with the greatest need
- **Current programs pursue a single approach to affordable rental housing—set-aside of units within a condo building for a specific income band.** The Trust concept allows for the development of diverse, mixed-income rental properties

TRUST MODEL	IMPACT METRIC	BASELINE	ESTIMATED QUAYSIDE IMPACT	POTENTIAL AT SCALE
SOURCES OF CAPITALIZATION	1 More efficient delivery of public subsidy	Deal-by-deal negotiation	Assembles multiple sources of public subsidy	Predictable funding; lower cost to operate at scale
USE OF FUNDS	2 Delivery of mixed-income, affordable housing	10% affordable*	40% below-market	Can increase depth & breadth of affordability; more flexibility
ONGOING CAPITAL SOURCES	3 Incubation of new affordable housing policy & delivery tools	None; one-time, "zero sum" subsidy	Condo flip tax	Top-loss guarantees, low-cost loans, pooled reserves
GOVERNANCE & ADMINISTRATION	4 Public-private partnership with increased oversight and compliance	No ability to income-verify after lease-up	New asset management function	Potential to scale beyond Toronto

* As required at scale (Eastern Waterfront, beyond Quayside) by the "bricks and mortar" bylaws requirement

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Our housing innovation toolkit for Toronto

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APPROACH

Housing Touch Points

TYPE	SOURCE	THE ASK	CITY	PROV	FED
Funding sources	City Open Door Program:	Existing "as of right" sources	✔		
	CMHC Co-Investment Fund	Existing "as of right" sources			✔
	Mid-range rentals	**POTENTIAL NEW:** Abatement on property taxes and development charges	✔		
	Affordability Innovation Fund	**POTENTIAL NEW:** Potential partnership model with Federal gov't			✔
	CMHC Rental Construction Loan	Existing "as of right" rental sources			✔
Unit sizes / efficiency	Open Door Guidelines	Policy change to allow smaller units relative to existing Open Door Guidelines	✔		
	Growing Up Guidelines	Clearance on unit sizes given commitment to family-sized units	✔		
Universal housing application	Product design and build	Inform and engage the Shelter, Support, and Housing Administration (SSHA)	✔		


SIDE WALK LABS
Thank You!
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Efficient Unit in Line with Toronto Benchmarks

Efficient unit size compared to market benchmarks

Min sq ft compared to downtown and waterfront developments



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Package of materials for briefing with MINO Chief of Staff – Thursday, January 31, 2019, 3:00pm

Package includes:

- Toronto Waterfront Revitalization Initiative (TWRI) Pl acemat
- Backgrounder on TWRI
    - Biographies of federally appointed Board members
- Port Lands Flood Protection Project Announcement (June 2017)
- TWRI presentation to Departmental Management Committee (January 23, 2019)
- Timeframe Gantt chart of Quayside Master Innovation and Development Plan process
- INFC summary of Ontario Auditor General Report on Waterfront Toronto
- Waterfront Toronto year Strategic Plan (2019-2023)

ATIA-69(1)(g)-(a)
ATIA-69(1)(g)-(c)

Toronto Waterfront Revitalization Initiative (TWRI)

Waterfront 1.0

In October 2000, Canada, Ontario, and Toronto announced a commitment of $500 million each to the TWRI to fund **"Waterfront 1.0"** which focused on a series of investments to start to transform the waterfront into sustainable new communities and to foster economic growth. Projects were focused on the Waterfront Designated Area Precincts of the Central Waterfront, East Bayfront and the West Don Lands.

Canada's contribution flowed through over 50 contribution agreements. Funded parks, recreational and public spaces and strategic land acquisition. Funds were also used to partially allocated for the Union Pearson Express and GO Transit ($90M).

Federal administration of the TWRI phase 1 contribution program ended on March 31, 2014.

Canada $500M	Ontario $500M	Toronto $500M
Exhausted in 2012/13	Exhausted in 2015/16	$100M scheduled to flow by 2022-23



- **The Designated Waterfront Area** is 800 hectares, roughly the size of Toronto's downtown core, from Bathurst Street to Sherbourne Avenue and Front Street to Bloor Street
- Waterfront Toronto has a $30-billion long-term plan to transform 800 hectares of brownfield lands on Toronto's waterfront into beautiful, accessible and sustainable mixed-use communities and dynamic public spaces

Governance

Waterfront Toronto (WT) , established in 2001 under provincial legislation as a not-for-profit entity mandated to lead and implement the TWRI with a 25-year mandate (2002/03–2027/28) set out in the TWRI Act with an option to "wind up" WT at year 20.

The Act provides for an independent **Board of Directors** comprised of a maximum of 13 members – 4 by each level of government and 1 jointly-appointed Chair. Directors' term of office is for a maximum of 3 years with the option to be reappointed. WT's CEO reports to the Board Chair.

WT A/CEO



Michael Nobrega (ON)

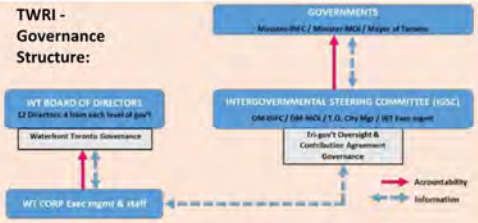
Federally appointed Board Members and term end-dates



Sevaun Palvetzian (Nov 2019); Jeanhy Shim (Jun 2020); Janet Rieksts-Alderman (Interim Chair, Nov 2019); Mazyar Mortazavi (Dec 2019)

Other Board Members include: Joe Cressy (TO) , Mohammed Dhanani (TO); Stephen Diamond (TO); Susan Henderson (TO); Note 3 vacant Ontario positions

TWRI - Governance Structure:



As of November 2015, the **Minister of Infrastructure and Communities** is responsible for federal activities relating to TWRI and for appointing Directors to the WT Board

Intergovernmental Steering Committee (IGSC) - serves as a focal point for intergovernmental management and coordination on matters related to the TWRI. WT reports its progress to the IGSC

IGSC current composition:

- *Deputy Minister, INFC (Chair for 2018/19)*
- *Deputy Minister, Ontario Ministry of Infrastructure,*
- *City Manager, City of Toronto*

Port Lands Flood Protection (2018/19–2024/25)

$1.25 billion shared equally between the 3 levels of government will open 356 hectares (880 acres) of waterfront land for long-term development

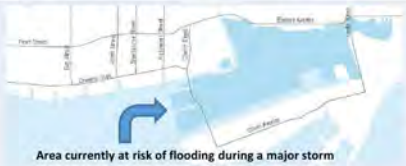
This Includes $32.5 million in approved funding for the Cherry Street Stormwater and Lakewater project under the Clean Water and Wastewater Fund (CWWF).

[redacted]

The Prime Minister announced funding on June 28, 2017, and a **Tri-government contribution agreement was signed with WT on May 1, 2018.**

Intended Project Outcomes:

• enhanced flood protection	• remediation of undeveloped brownfields
• the practice of sound environmental processes	• enhanced storm water management
• improved public access	• enhanced critical infrastructure
• improved environmental management of Toronto's waterfront area	• increased capacity to adapt to climate change impacts, natural disasters and extreme weather events
• more inclusive and accessible public spaces	• increased opportunities for economic growth and development



Area currently at risk of flooding during a major storm

TODAY



FUTURE STATE



Project	Cherry Street Stormwater and Lakefilling Project	Port Lands Flood Protection	Total funding by contributor
Government of Canada Contribution	$32.5 million	$384.2 million	$416.6 million
Province of Ontario Contribution	$16.25 million	$400.4 million	$416.6 million
City of Toronto Contribution	$16.25 million	$400.4 million	$416.6 million
Total funding by project	$65.0 million	$1.185 billion	$1.25 billion

Quayside

The Quayside project will encompass mixed-use 'smart' community concepts and innovative building and connectivity techniques.

In October 2017, after a 6-month RFP, Waterfront Toronto's Board of Directors endorsed the selection of **Sidewalk Labs LLC** as the Innovation and Funding Partner for the Quayside Project.

This is expected to lead to millions of dollars in private sector investment to test scalable smart city technology and approaches that would then be expanded onto the Port Lands area.

The Master Innovation and Development Plan
On July 31, 2018 Waterfront Toronto signed a Plan Development Agreement (PDA) with Sidewalk Labs. It sets out the basic terms and principles for the Quayside and Eastern Waterfront Master Innovation and Development Plan (MIDP) – **to be finalized by Sept 2019.**

The PDA commits Sidewalk to fund up to **USD$50M** for an initial phase of public engagement, joint planning and pilot project testing.



The 12-acre Quayside site consists of 3 separate blocks of land located in downtown Toronto at the east end of Queens Quay (Mostly owned by WT/City of Toronto



Digital Strategy Advisory Panel (DSAP): Arms-length body created in April 2018 to provide WT with objective, expert advice on responsible data and technology use across all WT projects, including Quayside.

Sidewalk presented DSAP with data governance proposals in Oct 2018.

DSAP meets publicly every month and reports to WT.

- (Chair)Dr. **Michael Geist**, Law Professor, Canada Research Chair in Internet and E-commerce Law, University of Ottawa
- **Dave Dame**, Agile Leader, Digital Factory, Scotiabank
- **Charles Finley**, Global Director of Marketing & Communications, IBI Group
- **Darin Graham**, Head of Canadian AI Operations, Samsung
- **Kurtis McBride**, Chief Executive Officer Miovision Technologies Incorporated
- **Carlo Ratti**, Director, MIT Senseable City Lab
- Dr. **Pamela Robinson**, Associate Professor, School of Urban and Regional Planning, Ryerson University
- Dr. **Teresa Scassa**, Canada Research Chair in Information Law and Policy, University of Ottawa, Faculty of Law
- **Jutta Treviranus**, Director and Professor at Inclusive Design Research Centre, OCAD University
- **Kevin Tuer**, Managing Director, Canada's Open Data Exchange
- **Mark Wilson**, former IBM Executive and former Chair, Waterfront
- **Alaina Aston**, VP, Data Management & Governance, Personal & Commercial Banking, RBC
- **Andrew Clement**, Professor Emeritus, Faculty of Information, University of Toronto

Toronto Waterfront Revitalization Initiative (TWRI)

Strategic Initiatives

Waterfront Toronto is working to create a vibrant, connected waterfront that belongs to everyone.

Mandate

Headquartered in Toronto, our organization was established in 2001 by the Government of Canada, the Province of Ontario, and the City of Toronto to unlock the social and economic potential of the waterfront. As of 2017, the three orders of government continue to fund our work as we pursue our mandate to apply best practices in urban revitalization—from new technology and infrastructure to leading strategies in design and sustainable development—to over 2,000 acres of underutilized land along Lake Ontario. We execute this mandate by leading waterfront revitalization initiatives with a wide range of partners, including community groups, developers, landscape and infrastructure designers, conservationists, contractors, businesses and all three orders of government.

We describe our work as waterfront revitalization, not redevelopment. This important distinction means that we don't simply develop real estate. Instead, we seek to deliver broader social, economic, and environmental objectives for Torontonians, Ontarians, and Canadians.

By coordinating key stakeholders around a strategic approach to waterfront revitalization, we're advancing important policy objectives, including: increasing economic competitiveness and creating jobs; reducing urban sprawl; developing mixed-use communities where families and businesses thrive; increasing the supply of affordable housing; expanding public transit; and creating great parks and public spaces.

Record

So far, we've led or catalyzed 2.5 million square feet of development along the waterfront, adding affordable housing, commercial space, aquatic habitat, critical infrastructure, and beloved public spaces. Our projects have included the West Don Lands, Corktown Common, Underpass Park, Sugar Beach, Sherbourne Common, Queens Quay, the Port Lands, Jack Layton Ferry Terminal, and The Bentway.

Strategic Initiatives

We're working to explore the potential of our waterfront to not only enhance life in Toronto, but to contribute to the urgent global conversation about how to create better cities. We're part of a worldwide community of practice that's using design, technology, and sustainability principles to support dense, vibrant urban communities that support strong economies, thriving people, and a healthy environment.

Sustainability. We're working with partners like C40 Cities to craft plans to reduce our greenhouse gas emissions to less than zero and to strengthen our green building requirements.

Connectivity. We're working with Beanfield Metroconnect to create one of the most connected neighbourhoods in the world, delivering ultra-fast internet to every household and expanding the availability of free public WiFi across the waterfront.

Affordability. We're looking at a range of financing, partnership, and development models that could create more affordable housing, faster.

Innovation. We've secured an innovation and funding partner to support the development of a visionary community at Quayside. We've also created memoranda of understanding with MaRS, an innovation accelerator, and Siemens, a global leader in automation.

Board Committees and Workforce

Gender breakdown of board:
50% Male; 50% Female

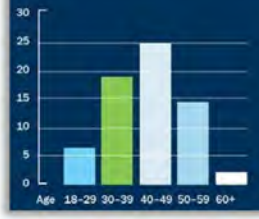
Gender breakdown of staff:
37% Male; 63% Female

Committees & panels

	Finance, audit & risk management committee	Stakeholder relations committee	Chairs committee	Investment, real estate, & quayside committee
Mandate	Financial reporting, audit, enterprise risk management, and project risk management	Public engagement, communications, partnerships	Human resources, government relations, governance	Quayside, development projects, and real estate transactions
Chair	Janet Rieksts-Alderman	Sevaun Palvetzian	Helen Burstyn	Susie Henderson Mazyar Mortazavi
Other members	Julie Di Lorenzo Susie Henderson Denzil Minnan-Wong Jeanhy Shim	Mohamed Dhanani Meric Gertler Jeanhy Shim	Susie Henderson Mazyar Mortazavi Sevaun Palvetzian Janet Rieksts-Alderman	Stephen Diamond Meric Gertler Michael Nobrega

*As of March 31, 2018

Employee age distribution



Waterfront Toronto staff*

Role	Male	Female	Total
Executive	5	5	10
Director	5	7	12
Professional Staff	17	29	46
Support Staff	0	5	5
Total	27	46	73

*As of December 31, 2017

Examples of projects that received federal funding under TWRI Phase 1 ("Waterfront 1.0"):

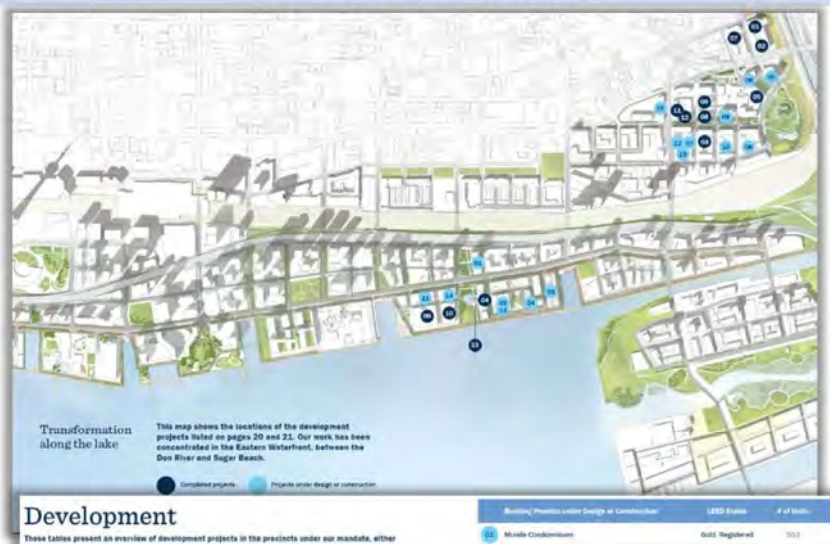

Sherbourne Common


Corktown Common


Simcoe Wave Deck


Sugar Beach

Development Activities



Development

These tables present an overview of development projects in the precincts under our mandate, either completed or underway. Individual buildings are generally owned by private developers or institutions; we work with partners to plan and design complete communities where people can live, work, and play.

	Completed Building Projects	LEED Status	# of Units	GFA (ft²)
01	River City Phase 1	Gold, Certified	169	83,100
02	River City Phase 2	Gold, Certified	200	139,000
03	Canary District	Gold, Registered	360	292,000
04	Aquabella	Platinum, Registered	301	281,000
05	Canary Park	Gold, Certified	437	300,000
	Total Market Residential		1,767	1,323,000
06	Corus Entertainment	Gold, Certified	0	475,000
	Total Commercial		0	475,000
07	Toronto Community Housing	Gold, Certified	243	212,904
08	West Don Lands Affordable Rental Housing (Wigwamen)	Gold, Certified	149	134,730
09	West Don Lands Affordable Rental Housing (Red Victor)	Gold, Certified	106	102,224
	Total Affordable Housing		498	449,898
10	George Brown College Waterfront Campus	Gold, Certified	0	265,000
11	Canary District—George Brown College Residences	Gold, Certified	0	131,500
	Total Institutional		0	396,500
12	Canary District—YMCA	Gold, Certified	0	99,345
13	Sherbourne Common Pavilion	Gold, Certified	0	1,540
	Total Community Services		0	100,885

	Building/ Projects under Design or Construction	LEED Status	# of Units	GFA (ft²)
01	Muse Condominium	Gold, Registered	353	479,000
02	Aquavista	Platinum, Registered	300	267,864
03	Aqualuna	Not Registered	226	429,428
04	Aquabella	Platinum, Registered	174	266,370
05	River City Phase 3	Gold, Registered	331	336,000
06	River City Phase 4	Gold, Registered	331	329,700
07	Block 10 West Don Lands	Not Registered	350	400,000
08	Block 13 West Don Lands	Not Registered	450	450,000
09	Canary Block	Gold, Registered	187	151,000
10	Canary Commons	Gold, Registered	400	853,540
	Total Market Residential		3,193	3,326,604
11	Waterfront Innovation Centre	Gold, Registered	0	300,000
12	Block 10 West Don Lands	Not Registered	0	20,000
	Total Commercial		0	320,000
13	Artscape in Aquavista	Gold, Registered	80	100,000
	Total Affordable Housing		80	100,000
14	George Brown College—The Arbour	Not Registered	0	179,542
	Total Institutional		0	179,542
15	Block 10 West Don Lands	Not Registered	0	75,000
16	Cherry Place—Rekai/Options for Homes	Not Registered	160	181,157
	Total Community Services		160	256,157

Toronto Waterfront Revitalization Initiative (TWRI)

BACKGROUND

The Government of Canada has partnered with the City of Toronto and Province of Ontario to invest $1.25 billion in the flood mitigation and reclamation of the Toronto waterfront. As part of the commitment by all three orders of government, Waterfront Toronto (WT) is leading the implementation of the initiative. This investment is allowing for the redevelopment of this vital part of the city, and for WT to develop innovative partnerships around proposed initiatives to build the communities of tomorrow, such as the Quayside project involving Alphabet subsidiary Sidewalk Labs.

Context

Waterfront Toronto is a tri-government body. As a not-for-profit entity with an independent Board of Directors established under provincial legislation in 2001, WT leads the Toronto Waterfront Revitalization Initiative (TWRI) and is responsible for overseeing operations, including hiring management and staff, and delivering on development projects. All three orders of government appoint members to its board of Directors and the Minister of Infrastructure and Communities (INFC) is responsible for appointing four federal members. The Minister of Infrastructure and Communities is responsible for federal matters relating to WT. For 2018-19 the Deputy Minister of INFC is Chair of the DM-level Inter-Governmental Steering Committee which serves as a focal point for intergovernmental management and coordination of matters related to the TWRI.

In June 2017, the federal government announced a funding contribution of $416 million towards flood protecting Toronto's Port Lands. This includes $32.5 million for the Cherry Street Stormwater and Lakefilling project (Cherry Street) funded separately under the Clean Water and Wastewater Fund (CWWF). The Port Lands Flood Protection Project Contribution Agreement (PLFP CA) came into effect on May 1, 2018.

The Port Lands Project is expected to unlock 880 acres of waterfront land for future growth and development by providing critical flood protection to southeastern portions of downtown Toronto, and converting the area from underutilized, industrialized lands into accessible public and green spaces. The work will also see upgrades made to critical infrastructure including roads, bridges, and water systems. Part of the scope includes work on the Cherry Street project which will create the required land base for the larger flood protection plan by lake filling around Essroc Quay.

Work on the Port Lands Project is progressing on schedule and WT has commenced site mobilization. Construction of the PLPF started on June 18, 2018 and is expected to end on March 31, 2024. The Cherry Street project is also progressing on schedule, with barges currently delivering core stone fill onsite and substantial completion expected in June 2019.

In October 2017 WT partnered with Sidewalk Labs, a subsidiary of Google parent-company Alphabet, on "Quayside." The project aims to use a 12-acre section of Toronto's

eastern waterfront to develop world-leading design and technologies to create the city of tomorrow. This would encompass a mixed-use of 'smart' community concepts, innovative building techniques, connectivity and a climate positive approach to city building.

Waterfront and Sidewalk Labs have entered into a Plan Development Agreement (PDA). The PDA commits Sidewalk Labs to a direct funding commitment of $50 million toward fully developing a long-term Master Innovation and Development Plan (MIDP) for Quayside, and to consider moving Google Canada's headquarters to the waterfront area as an anchor for the urban innovation cluster. The PDA also contains a number of principles around Intellectual Property (IP), data governance and privacy, public engagement and communications, and government relations – which are intended to address public concerns in these areas. The PDA was made public on July 31, 2018 with much media attention paid to data governance and privacy questions.

The PDA is clear that Sidewalk Labs does not have any rights to the land. It will however be permitted to work with WT on the vision/planning of the larger eastern waterfront. Land valuation and disposition methodology will be negotiated over the course of the MIDP's development.

The federal government is not a funding partner in the Quayside project. Its interest in WT's engagement with Sidewalk Labs is to understand how its activities will inform Government of Canada policy development on data ownership/control, privacy and ethics. INFC acts as a portal for linking to the broader federal community on policy questions and other issues.

Waterfront's Board of Directors will endorse the plan before it can be adopted and implemented. Governments will review MIDP without prejudice to its consideration by Waterfront Toronto. As it is a plan, should it advance, individual components brought forward for implementation will be subject to multiple City approvals and provincial/federal regulations as appropriate

The Quayside project is viewed as a long-term project that would likely extend beyond WT's 25-year mandate which expires in 2028. [redacted]

Public Engagement

Citizen concerns have arisen around privacy and data in a smart cities context. The main concerns include: surveillance; data collection; data sharing and selling; data storage, including where and for how long; and privacy – including anonymized data and the risks of re-identification. On these issues Waterfront has established an expert, arms-length Digital Strategy Advisory Panel (DSAP) to help guide the Corporation on how best to incorporate data privacy, digital systems, and the safe and ethical use of new technologies in the next phase of waterfront revitalization. The Panel was formed in April 2018 and is initially advise Waterfront Toronto on policies and strategies related to the Quayside project.

Waterfront Toronto is supporting extensive public dialogue and engagement on Quayside. Waterfront is integrating DSAP efforts with other experts and groups (MaRS, Toronto Board of Trade), and is leading a series of **Civic Labs** to bring experts from tech, government, academia and private and non-profit sectors to provide feedback on considerations applicable to Quayside project . Waterfront and Sidewalk have also co-organized a number of large **Public Roundtables** to cover specific aspects of Quayside and the covering MIDP work plan.

INFC is committed strong oversight of Waterfront Toronto on these issues. Through the Inter-Governmental Steering Committee, INFC engages alongside the other government partners on high-level issues and acts as a bridge back to the federal family, while fostering a strong bond between Waterfront's Board and executive team on the implementation of its mandate and management of operational matters.

Attachments:

- Biographies of Federally appointed Waterfront Toronto Board members, Board Chair, and CEO

Attachment - Waterfront Toronto Board of Directors

Waterfront Toronto's Board of Directors is composed of 12 Board members (4 each appointed by the Government of Canada, the Province of Ontario and the City of Toronto) and a Chair, jointly appointed by the three orders of government. Members serve for three-year renewable terms. Board members include:

Appointed by the Government of Canada:

- Janet Rieksts-Alderman (December 2016 – has been serving as interim Board Chair since December 2018)
- Sevaun Palvetzian (December 2016)
- Mazyar Mortazavi (January 2017)
- Jeanhy Shim (June 2017)

Appointed by the City of Toronto:

- Joe Cressy (January 2019)
- Mohamed Dhanani (April 2016)
- Stephen Diamond (April 2016)
- Susan Henderson (April 2016)

(Note that all the Ontario appointees to the Board were dismissed in December 2018, and provincial positions on the Board are currently vacant. Mr. Micheal Nobrega has been allowed to continue in the role of acting CEO (since July 2018) until a permanent CEO is identified)

Biographies of the federally-appointed board members, and the Waterfront Toronto Acting CEO are attached.

Janet Rieksts-Alderman
Director, Waterfront Toronto



Jeanhy Shim
Director, Waterfront Toronto



Appointed by the government of Canada in June 2017.

Jeanhy has been working in the real estate development industry for the past 25 years, providing strategic market analysis, advice and innovative solutions to leading developers, financial institutions, brokers and consultants in the Toronto GTA. Her experience spans the full spectrum of real estate development, including land acquisition, market research and analysis, product development, sales and marketing strategy, sales team management, customer service and post-construction service.

As a Vice President or Consultant, Jeanhy has been involved in over 100 residential projects across the Toronto GTA, as well as projects in other areas of Ontario, Canada and USA. In 2013, she also founded Housing Lab Toronto – an independent housing research think-tank dedicated to re-thinking how we grow our cities; and in 2015, she launched the Children's Discovery Centre pilot project - Toronto's first and only children's museum. The goal of the pilot was to demonstrate a growing need for family-friendly amenities as key part of our growing city, and based on its success, work is now underway to open a permanent, world-class children's museum in Toronto.

Jeanhy has a Master's degree from the London School of Economics and Political Science, and a B.A. from McGill University.

Mazyar Mortazavi
Director, Waterfront Toronto



Appointed by the government of Canada in January 2017.

Mazyar Mortazavi, President and CEO of TAS, is a prominent Toronto city builder with a passion for community-based initiatives. As an entrepreneur for the public good, Mazyar operates on the philosophy that connected communities lead to more beautiful, resilient cities. With this passion for cities, he spearheads projects and initiatives that celebrate culture and art, prioritize sustainability, and foster positive neighbourhood relationships.

After receiving his undergraduate degree in Environmental Studies and Masters in Architecture from the University of Waterloo, Mazyar joined TAS, the family business. Over the past 16 years, he has applied a strong environmental and progressive approach to business earning TAS a B Corp certification and numerous project awards. Under Mazyar's direction, TAS is on the leading edge of change, developing beautifully designed residential and commercial buildings in multiple urban neighbourhoods.

Sevaun Palvetzian
Director, Waterfront Toronto



Appointed by the government of Canada in December 2016.

Sevaun Palvetzian has been CEO at CivicAction since January of 2014. Before CivicAction, Sevaun held several senior executive roles within the Ontario Government including leading the Ontario Place Revitalization project and launching the Youth and New Professional Secretariat – a government-wide strategy to attract and retain future generations of leaders which included launching the award-winning Learn and Work Program for at-risk youth.

Prior to her work in government, Sevaun held positions at the University of Toronto, the World Bank Group, and Presidential Classroom, a Washington D.C. -based civic education organization. Sevaun frequently contributes to city-building efforts including serving as a member of the Premier's Community Hubs Advisory Group, the City of Toronto's Poverty Reduction Strategy Advisory Committee, The Toronto Police Service Board Transformational Task Force, and as a member of Mayor John Tory's Advisory Panel for International Hosting Opportunities. She also sits on the Board of Directors for both Toronto Region Immigrant Employment Council (TRIEC), NPower Canada, and is a member of Ivey Business School Leadership Council.

She completed the Ivey Executive Program at the Ivey School of Business and has an M.A. in history from the University of Western Ontario.

Michael Nobrega
Acting President and CEO, Waterfront Toronto



Michael Nobrega has been Chair of the Board of Directors of Ontario Centres of Excellence (OCE) since 2012, previously serving as a member since 2007. He is former President and CEO of the Ontario Municipal Employees Retirement System (OMERS), one of Canada's largest pension plans with more than $95 billion in assets. In mid-2014, Mr. Nobrega was appointed to chair of the Expert Panel on the restructuring and refinancing of the 750,000 square feet of the MaRS West Tower in the MaRS Discovery District in Toronto. He was also appointed by the provincial government as chair of the Expert Panel on the refurbishment of the 1.2 Million square feet MacDonald block in downtown Toronto. A veteran financial and investment executive with more than 30 years' experience, he previously served as President and CEO of OMERS' wholly owned subsidiary, Borealis Infrastructure Management Inc., an investment entity that originated and structured infrastructure investments for the OMERS pension fund. Prior to Borealis, Mr. Nobrega was a tax partner at Arthur Andersen, a major international accounting firm. Mr. Nobrega holds an Honours BA from the University of Toronto. He also holds a chartered accountancy designation from the Institute of Chartered Accountants of Ontario and the Canadian Institute of Chartered Accountants. In 2009 Mr. Nobrega was named a Fellow of the Institute by the Institute of Chartered Accountants of Ontario.

Governments of Canada, Ontario and Toronto announce funding to protect and transform Toronto's Port Lands

Governments of Canada, Ontario and Toronto announce funding to protect and transform Toronto's Port Lands



Ottawa, Ontario - June 28, 2017

The governments of Canada, Ontario and Toronto are committed to protecting our communities and Canadians from the risks associated with climate change. Investing in projects like the Toronto Port Lands Flood Protection Project not only supports climate resilience – it also supports economic growth, spurs innovation, and creates good, well-paying jobs for the middle class.

Today, the Prime Minister, Justin Trudeau, the Premier of Ontario, Kathleen Wynne, and Mayor of the City of Toronto, John Tory, joined Waterfront Toronto CEO Will Fleissig to announce joint funding of $1.185 billion for Waterfront Toronto. The Government of Canada will contribute up to $384 million to this project, and the Government of Ontario and the City of Toronto will each contribute over $400 million.

These investments will help protect Toronto's Port Lands from flooding and lay the groundwork to transform the underused industrial area into a vibrant and resilient downtown neighbourhood.

In the last decade, global warming has resulted in increased flooding in urban areas. The Project will provide critical flood protection through the creation of a naturalized mouth for the Don River. It will also help clean up contaminated soil, unlock land ripe for development, and establish new aquatic habitats and wetlands that support native species.

These efforts will help support the long-term transformation of the Port Lands into beautiful new mixed-use communities with residential and commercial development – including affordable housing – surrounded by parks and green space.

These investments will help safeguard the health and well-being of residents, and increase the resiliency of nearby communities and their capacity to adapt to the impacts of climate change.

Quotes

> "Canada's waterfronts are a resource to be enjoyed by all Canadians, today and tomorrow. This project will help residents of Canada's largest city adapt to the impacts of a changing climate while spurring local economic growth. With local and provincial partners, we are taking action today to protect our environment and leave a cleaner, more prosperous economy for generations to come."
> — *The Right Honourable Justin Trudeau, Prime Minister of Canada*

> "The Government of Canada recognizes that remediation and flood protection infrastructure is essential to creating better, more resilient and sustainable communities and a safe and healthy environment. We are working with our partners to make sure they have the support they need to build these communities. It's through initiatives like the Port Lands Flood Protection project that we will build the Canada of the 21st century and ensure a high quality of life for generations to come."
> — *The Honourable Amarjeet Sohi, Minister of Infrastructure and Communities*

"This is a major milestone in the revitalization of an important piece of Ontario's waterfront and we are pleased that all three levels of government are coming together to move forward with this work. Using a model proven successful in other waterfront communities, we are on our way to building a new neighbourhood that will be a vibrant place to live – a hub for good jobs and economic growth, and a mixed-use community that can be accessed and enjoyed by all. I am thrilled that we're unlocking the incredible potential of these lands for people in Toronto and across Ontario."
— *The Honourable Kathleen Wynne, Premier of Ontario*

"Port Lands Flood Protection is a key Council priority and part of the City's vision for a vibrant, clean Toronto waterfront. The major investment that all three orders of government are announcing today will unlock the potential of underutilized waterfront lands, protect the area from flooding and support Toronto's long-term growth by creating new parks, natural areas, and mixed-use neighbourhoods – new places to live, work and play. Toronto is unique among North American cities to have such an asset on the doorstep of its downtown."
— *John Tory, Mayor of the City of Toronto*

Quick facts

- The Port Lands Flood Protection project will take approximately seven years to complete and will be delivered by Waterfront Toronto, a public development corporation, established in 2001 by the federal, provincial and municipal governments to lead the revitalization of Toronto's waterfront.
- On September 14, 2016, the governments of Canada and Ontario and the City of Toronto announced $65 million in infrastructure funding under the Clean Water and Wastewater Fund for the Cherry Street Storm Water and Lakefilling project. This amount is included in total $1.25 billion costs for the Port Lands Flood Protection project.
- Over the next 12 years, the Government of Canada will provide more than $180 billion in funding for public transit, green infrastructure, social infrastructure, transportation that supports trade, and rural and northern community infrastructure. This includes $21.9 billion proposed in Budget 2017 for green infrastructure, $5 billion of which will be available for investment through the Canada Infrastructure Bank.

Related product

- Backgrounder: Investment to protect and transform Toronto's Port Lands (/eng/news/2017/06/28/investment-protect-and-transform-torontos-port-lands)

Associated links

- Government of Canada's $180-billion+ infrastructure plan in Budget 2017 (http://www.budget.gc.ca/2017/docs/plan/chap-02-en.html)
- Infrastructure Canada and the Toronto Waterfront Revitalization Initiative (http://www.infrastructure.gc.ca/twri-irrt-eng.html)
- Build ON 2017 Infrastructure Update (https://www.ontario.ca/page/buildon-2017-infrastructure-update)
- Waterfront Toronto (http://www.waterfrontoronto.ca/nbe/portal/waterfront/Home)
- Waterfront Toronto – Port Lands Flood Protection (http://www.waterfrontoronto.ca/nbe/portal/waterfront/Home/waterfronthome/projects/don+mouth+naturalization+and+port+lands+flood+protectio

Investment to protect and transform Toronto's Port Lands

Investment to protect and transform Toronto's Port Lands

Ottawa, Ontario - June 28, 2017

In the last decade, climate change has resulted in increased flooding in urban areas. By protecting 240 hectares (593 acres), the Port Lands Flood Protection Project will enhance Toronto's resiliency, help mitigate the impact of climate change on the city, and deliver a substantial return on investment by helping to set the stage for future residential and commercial development in the Port Lands.

The Port Lands Flood Protection Project will help create a resilient neighbourhood with a high quality of life for people of all ages and incomes. It is a comprehensive plan that will protect southeastern portions of downtown Toronto from flooding and unlock the area's potential for development.

The project will also support economic development and job creation, as the Port Lands has enormous potential for residential and commercial development in a part of the city left unchanged during decades of development.

The project will create a new river valley through the Port Lands that allows for the natural flow of water from the Don River to Lake Ontario, involves the excavation, remediation and placement of contaminated post-industrial soil, and raises the grade in most of the area by an average of two metres.

There are four main components to the Port Lands project:

1. **Earthworks**
   As the defining aspect of the Port Lands project, this component will include extensive earthwork (1.5 million cubic metres of excavated soil, additional soil remediation and handling and placement of excavated soil) required to implement grade changes, and create over 1,000 metres of naturalized river valley, a new greenway, and a sediment management area north of the Keating Channel.

2. **Roads, services and utilities**
   This component involves the installation of new municipal infrastructure, including water mains, wastewater and storm water sewers. It will also involve the creation of roads and a transit right-of-way, and the relocation of hydro utilities.

3. **Bridges and dockwall structures**
   This component will include the design and construction of three new bridges and the extension of the Lake Shore Boulevard Bridge to create a wider opening over the river. Dockwalls will be also modified and created.

4. **Parks, public realm and naturalized areas**
   This component will create 29 hectares of new naturalized area in the river valley, which includes 14 hectares of aquatic habitat, plus an additional 16 hectares of new parkland – all of which will strengthen biodiversity and help clean our water. This component will also involve the construction of trails, boardwalks, overlooks, a small boat launch and fishing sites within the floodplain area. Parks, paths, planted woodlands and a water's edge promenade will be built outside the floodplain area.

The Port Lands Flood Protection Project builds on the substantial progress made by the federal, provincial and municipal governments to revitalize Toronto's eastern waterfront. This includes a flood protection landform completed in 2012 to protect 210 hectares (519 acres) in the West Don Lands neighbourhood and eastern downtown Toronto.

Project	Cherry Street Stormwater and Lakefilling Project	Port Lands Flood Protection	Total funding by contributor
Government of Canada Contribution	$32.5 million	$384.2 million	$416.6 million
Province of Ontario Contribution	$16.25 million	$400.4 million	$416.6 million
City of Toronto Contribution	$16.25 million	$400.4 million	$416.6 million
Total funding by project	$65.0 million	$1.185 billion	$1.25 billion

Related product

- Governments of Canada, Ontario and Toronto announce funding to protect and transform Toronto's Port Lands (/eng/news/2017/06/28/governments-canada-ontario-and-toronto-announce-funding-protect-and-transform)



Toronto Waterfront Revitalization Initiative

Quayside Update

January 2019

Overview

Recap

- What is Waterfront Toronto & Quayside Objectives

Master Innovation and Development Plan (MIDP)

- Pillars
- Process to date
- Federal touchpoints
- Timelines and next steps

Questions

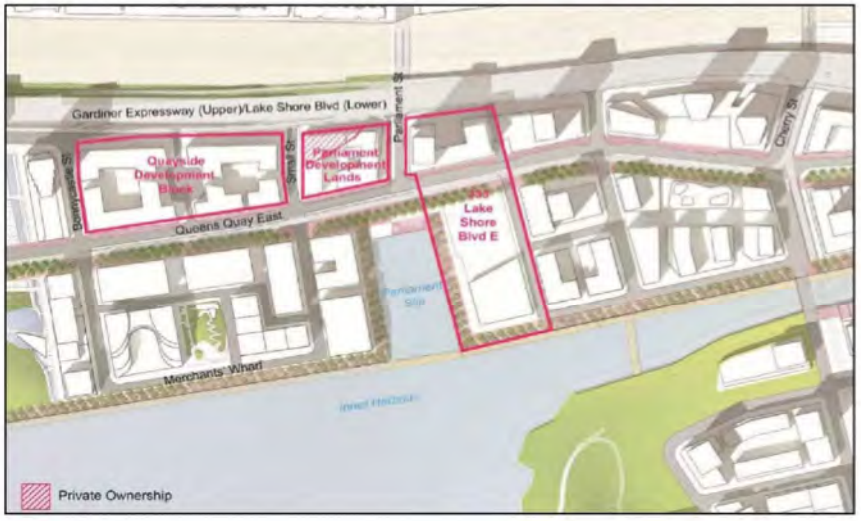
What is Waterfront Toronto?

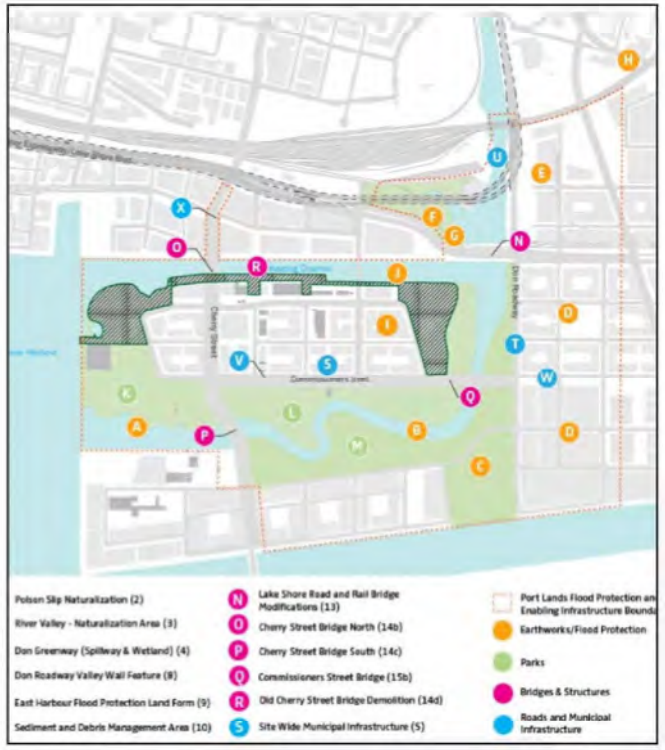
- **Arms-length not-for-profit agency** established in 2001 by Canada, Ontario and City of Toronto (formally exists under provincial statute)
- 25-year mandate to lead and implement Toronto Waterfront Revitalization Initiative (TWRI) to enhance economic, social and cultural value of land in designated waterfront area
- Tri-government body led by an independent Board
- **Intergovernmental Steering Committee** (IGSC) a focal point for management and coordination on matters related to TWRI – current IGSC Chair held by INFC DM Gillis
- Major Waterfront projects currently include Port Lands Flood Projection and, in partnership with Sidewalk Labs, the proposed **Quayside development**

Where is the Quayside site?

A 4.9-hectare (12-acre) development site situated along Toronto's eastern waterfront, within walking distance of the central business district







Port Lands Flood Protection Project area is next to Quayside site

Waterfront's Objective for Quayside

- **In 2016:** Waterfront recognized an opportunity to advance ambitious sustainability and innovation mandates in Quayside
- Wanted to bring on a partner with a fresh vision on addressing pressing urban challenges – climate change, affordability, creating jobs and prosperity – while also having the financial capacity to fund the planning process
- **March 2017:** Waterfront launched RFP seeking an Innovation and Funding Partner to help create a plan for a neighbourhood of the future; selection of Sidewalk Labs announced in October, 2017
- **July 2018:** Waterfront signed a Plan Development Agreement (PDA) with Sidewalk that sets-out basic terms and principles for developing a Plan for Quayside

Sidewalk's Vision for Quayside

- A people-centred community combining innovative urban design and new digital tech that addresses some big challenges facing cities, e.g. energy use, housing affordability, and transportation



- Will also explore "at scale" development proposals that could be rolled-out on Toronto's eastern waterfront

Sustainability

Complete Communities

Prosperity

Partnership & Investment

Quayside MIDP

- Sidewalk has been engaged by Waterfront to bring forward proposal for Quayside in the form of a **Master Innovation and Development Plan (MIDP)** founded on several "pillars" – not just a data play

MIDP Pillars	
SUSTAINABILITY Climate positive community	**COMMUNITY & CITY SERVICES** Close-knit, health community with seamless access to vital daily services
PUBLIC REALM Designed for the entire region, vibrant year-round	**HOUSING AFFORDABILITY** Inclusive, affordable communities for people of all ages, abilities and means
MOBILITY Competitive, safer alternatives to the private automobile	**DIGITAL PLATFORM** Open digital infrastructure that inspires innovation
BUILDINGS A built environment that is more usable, efficient and affordable	**PRIVACY & DATA GOVERNANCE** A new standard for transparent, accountable and responsible data use

"…Sidewalk Toronto will transform Quayside into a thriving hub for innovation and a community for tens of thousands of people to live, work, and play. This project offers unprecedented opportunities for Canadian innovators and will create thousands of good, middle class jobs. The new technologies that emerge from Quayside have the potential to improve city living – making housing more affordable and public transit more convenient for Canadians and their families."

Prime Minister Justin Trudeau, October 17, 2017

ATIA - 21(1)(b)

MIDP Process to Date

Expert & Public Engagement

Digital Strategy Advisory Panel (DSAP)

- Arms-length body created in April 2018 to provide Waterfront with objective, expert advice on responsible data and technology use for Quayside, including data governance aspects of MIDP
- Integrating efforts with other experts and groups (MaRS, Toronto Board of Trade)

Waterfront Civic Labs

- Bringing experts from tech, government, academia and private and non-profit sectors to provide feedback on considerations applicable to Quayside project

Tri-government Briefings

- Hosted by Waterfront for tri-government senior officials as MIDP is being developed

[redacted]

Sidewalk Public Roundtables

- Four roundtables to date covering MIDP workplan, public realm, streets, buildings, site plan, sustainability, affordable housing, social infrastructure and digital governance

MIDP - Federal Touchpoints

- Consideration of Quayside proposal expected to involve multiple touchpoints across federal government, including with respect **infrastructure and innovative finance**



Innovative technology uses
ISED, INFC, OPC, TBS,

Data governance / IP
ISED, StatsCan, OPC, TBS, INFC

Funding transit & other infra
TC, INFC

Autonomous vehicles
ISED, TC, INFC

Affordable housing
CMHC, ESDC, NRCan

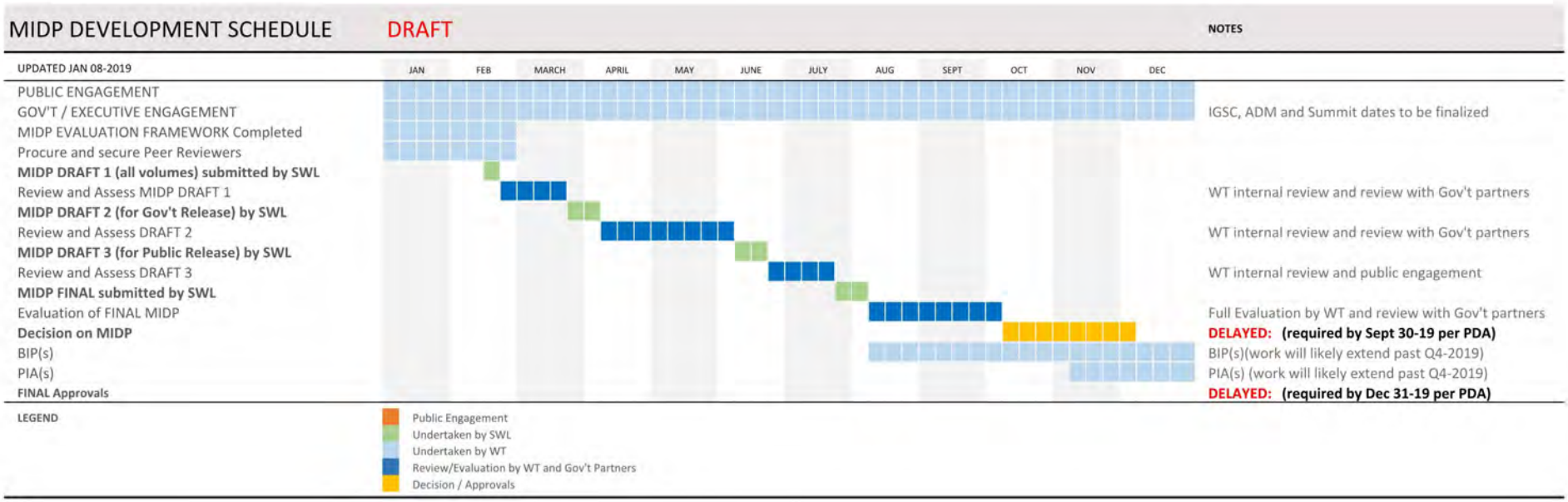
Sustainability
NRC, NRCan, ECCC, ISED, INFC

ATIA - 21(1)(a)
ATIA - 21(1)(b)

MIDP Timelines & Next Steps

- Complete draft MIDP for governments' review expected in spring 2019 –
  - 3-volume document comprising:
    - development plans at different scales
    - innovative technology solutions
    - business terms and financial approach to implementation
- Public consultation draft to follow – engagement through summer 2019
- 'Final' draft for Waterfront Board consideration targeted for September 2019
- Waterfront Board must endorse the plan before it can be adopted and implemented
- [redacted]
- As it is a plan, should it advance, individual components brought forward for implementation will be subject to multiple City approvals and provincial/federal regulations as appropriate

MIDP DEVELOPMENT SCHEDULE — DRAFT



Ontario Auditor General (OAG) Value-for-Money Audit Report of Waterfront Toronto

OVERVIEW

The OAG report has 10 specific recommendations, four of which are directed at the Ontario Ministry of Infrastructure "in conjunction with partner governments." The other six are directed at Waterfront Toronto. Three overarching themes come out of the report for the consideration of governments.

The first is with regard to WT's mandate. The OAG found that WT does not have enough of a mandate to carry out its activities, and has relied on the City of Toronto's Central Waterfront Secondary Plan as a guide for revitalization rather than creating its own master plan or large-scale vision. The OAG thus recommends that WT mandate be reviewed to ensure that it has the authority to do what it needs to do., and does not overlap with other entities that Waterfront mandates such as Ontario Place and CreateT.O.

The second theme has to deal with tightening the framework to guide funding decisions with respect to WT. In this respect the audit has pointed out the number (over 90) and complexity of individual contribution agreements struck over the first phase of revitalization. The OAG has also pointed to the seeming lack of a full dispute resolution mechanism afforded to government partners at the level of the IGSC. Lastly the audit points to the need to establish and monitor for broad corporate performance measures at the level of goals and objectives for WT. These would distinguish themselves from project-level performance targets typically found in transfer payment agreements between governments and the corporation.

The third theme has to deal with WT's project with Sidewalk Labs. The OAG makes observations with respect to the procurement process that led to the selection of SWL. Concerns of the OAG have to deal with the shortened timeframe respondents were given to respond compared to previous RFPs (six versus 10 weeks), and discussions WT had with SWL prior to the issuance of the RFP. Lastly, the OAG has noted the multitude of policy and regulatory and public concerns around the creation of Smart City and Toronto. As a result, the OAG recommends that further study be undertaken on these questions and that and advisory council be established to provide advice on the appropriate policy and legislative framework to put in place around a Quayside Smart City.

Main findings and specific recommendation of the OAG report are listed below.

A. MAIN FINDINGS

Mandate

- *Waterfront Toronto was not given ownership over the lands it was tasked to revitalize, and therefore the visions of those with ownership controlled the decisions over waterfront development. Waterfront*
- *Waterfront Toronto did not pursue more large-scale planning of the entire waterfront development.*
- *Waterfront Toronto's development mandate overlaps with other entities, which can cause development delays and duplication of effort.*

Use of Government Funding

- *Governments provided funding on a project-by-project basis through complex funding agreements.*
- *The governments redirected $700 million (approximately 47%) of their original $1.5 billion in funding commitments to other agencies for other projects.*
- *Waterfront Toronto has not met its mandate of making development financially self-sustaining.*
- *Waterfront revitalization project costs exceeded initial estimates.*
- *Monitoring projects against budgets was difficult due to poor documentation.*
- *Waterfront Toronto provided poor oversight of those projects where it transferred funds to other organizations to conduct the development work.*

Port Lands Flood Protection

- *The upfront provision for consulting, operating and other costs and contingencies is significant (at $453 million) and amounts to 37% of the projected total.*

Sidewalk Labs Project

- *Waterfront Toronto communicated and provided information to Sidewalk Labs and other potential bidders prior to the issuance of the request for proposals (RFP).*
- *Unlike its previous operating practices, Waterfront Toronto did not adequately consult with any levels of government regarding the Sidewalk Labs project.*
- *Because the smart city site will likely be larger than the Quayside lands, even more attention will need to be given to addressing the significant public concerns with this project.*
- *The project has raised public concerns regarding data collection and use.*
- *Uncertainty exists about whether Waterfront Toronto and Sidewalk Labs will comply with provincial procurement obligations and the memorandum of understanding with the City of Toronto.*

B. SPECIFC RECOMMENDATIONS AND FORMAL RESPONSES

(The report contains six recommendations for Waterfront Toronto and four for the Ministry of Infrastructure (MOI), consisting of 36 action items. Recommendations for MOI are highlighted in red)

Mandate and Original Funding

Waterfront Toronto Conducted Limited Direct Development of Waterfront; Waterfront Toronto Had Limited Authority to Lead Revitalization

1. *To have Waterfront Toronto's mandate reflect the public and governments' vision for a revitalized waterfront, and so that it does not overlap with other entities' mandates in the future, we recommend the Ministry of Infrastructure, in consultation with partner governments:*
   - *conduct a review of Waterfront Toronto's mandate, focusing on defining clearly the role and authority necessary for it to play in revitalizing the waterfront for the remainder of its legislated term; and*
   - *clarify the roles and responsibilities of existing organizations such as CreateTO and the Ministry of Tourism, Culture and Sport, which may have overlapping mandates or interest in the revitalization of Toronto's waterfront.*

Ministry response: The Ministry acknowledges the importance of establishing clear roles between the levels of government and Waterfront Toronto in the development of Toronto's waterfront. The provincial government will discuss with its government partners the Auditor General's recommendations on a mandate review and on how best to clarify roles and responsibilities between relevant organizations.

The provincial government, along with the federal government and the City of Toronto, utilizes an Intergovernmental Steering Committee that jointly supports Waterfront Toronto to fulfill its mandate and to facilitate collaboration with other relevant parties. The Province has also actively engaged with relevant government partners to ensure decisions are made in alignment with other key initiatives.

The provincial government is working with government partners and Waterfront Toronto to develop an accord that will strengthen accountability and clarify the roles and responsibilities of each party. The Province, working with its government partners, will also consider these recommendations as it works with and reviews Waterfront Toronto's 2019–2023 Strategic Business Plan.

The provincial government will continue to work with its partners to support Waterfront Toronto in effectively delivering on its mandate and collaborate with other relevant agencies and corporations.

Actual Project Spending Exceeded Estimated Project Costs

2. *To deliver future projects, such as the flood protection of the Port Lands, on time, on budget and in accordance with the planned scope, we recommend that Waterfront Toronto:*
   - *consistently develop detailed project plans and cost estimates based on engineering and technical studies;*
   - *set budget and completion timelines for each component of the Port Lands flood protection project and other projects using the information and estimates it gathers through the engineering and technical studies; and*
   - *ensure all levels of government have signed off on project spending needs before commencement of a project.*

Waterfront Toronto Response: Waterfront Toronto supports the recommendation. Consistent with our current practices, which have been applied to the Port Lands flood protection project, Waterfront Toronto will develop detailed project plans and cost estimates based on design, engineering and technical studies for future projects. The overall budget of $1.25 billion and completion timeline of late 2023 for the Port Lands flood protection project was established in the October 2016 due diligence report, which was completed by a competitively procured team of multi-disciplinary professionals to create more certainty on the project's cost, schedule and risks prior to the funding commitment from governments.

Waterfront Toronto will set the budget and completion timelines for each individual component of the Port Lands flood protection project and other projects using the information and estimates it has gathered through design, engineering and technical studies at the 30% design drawing stage, in accordance with leading industry practice and will continue to do so for future projects.

Waterfront Toronto's current practice is to ensure a signed funding agreement with governments is in n place prior to the commencement of a project.

Difficult to Monitor Projects against Budgets Due to Poor Documentation; No Process to Guide the Review of Invoices

3. *To have the required systems and procedures in place to effectively manage the Port Lands flood protection project and other projects, we recommend that Waterfront Toronto:*
   - *complete the implementation of a project management information system to track project progress against budgets and timelines;*
   - *actively monitor change orders, investigate instances where cost trends suggest budgets may be exceeded and take corrective actions when necessary, such as modifying the scope of a project or simplifying its delivery to ensure project costs are within budget;*
   - *provide regular updates to senior management on project status with explanations for significant variations between budget and actual cost;*
   - *provide Board members with regular project progress updates, including comparisons to budgets and timelines, to enable them to exercise oversight;*
   - *provide the three levels of government with regular project progress updates, including actual-expense-to-budget information and timelines, to enable them to exercise their oversight;*
   - *develop and implement guidelines for the review of construction invoices, including appropriate and timely site visits; and*
   - *establish a file management, document and archival policy.*

Waterfront Toronto Response: Waterfront Toronto supports the recommendation. Waterfront Toronto is currently implementing a new Enterprise Resource Planning (ERP) system to enhance its ability to manage, monitor and report on projects—including project budgets and change orders, enhancing transparency and accountability, and increasing operational effectiveness and risk management. This system is expected to be operational in early 2019.

Waterfront Toronto's current practice in a situation of unavoidable cost that cannot be managed by the contingency is to:

- reduce project costs through value engineering or alter timelines without modifying project scope; and/or
- if necessary, obtain approval to modify the project scope, through the deferral or elimination of non-critical project elements to ensure that the budget can be met.

In early 2018, Waterfront Toronto enhanced its project governance to create a formal Capital Program Management Office (CPMO) to streamline and strengthen controls related to project and program management.

The CPMO has developed new project oversight dashboard reports that will be used to provide regular updates to senior management, Board members and the three levels of government on project status and key risk areas, as well as budget, cost, scope and schedule variations.

In fall 2018, Waterfront Toronto improved the documentation related to its existing processes for the review of construction invoices, including appropriate and timely site visits by project cost certifiers.

Waterfront Toronto is currently developing a file management and document retention policy and anticipates adoption of this policy on or before December 31, 2019.

Waterfront Toronto Had Weak Oversight over Projects It Funded Other Organizations to Deliver

4. *To improve oversight of organizations receiving funding from Waterfront Toronto so that projects are delivered on time, on budget and in accordance with the planned scope, we recommend that Waterfront Toronto:*
   - *include project budgets and timelines for completion in formal agreements with recipient organizations;*
   - *approve projects and associated funding only after satisfying itself that the funds requested by recipient organizations are based on detailed and reliable budget estimates;*
   - *require and review quarterly project updates and reports from recipient organizations and follow up with the recipient organization in cases where there are risks of cost overruns;*
   - *provide Board members with regular project progress updates, including comparisons to budgets and timelines, to enable them to exercise oversight;*
   - *provide the three levels of government with regular project progress updates, including actual-expense-to-budget information and timelines, to enable them to exercise their oversight;*
   - *develop and implement processes for the review of contractor invoices provided by recipient organizations, including appropriate and timely site visits; and*
   - *establish a file management, documentation and archiving policy.*

Waterfront Toronto Response: Waterfront Toronto supports the recommendation. Waterfront Toronto has not entered into any new eligible recipient agreements in the past five years nor does it anticipate transferring any major funding to recipient organizations over the next five years.

Waterfront Toronto's current practice is to specify appropriate contract terms— including project budgets and timelines for completion— with all vendors (including those previously deemed to be "eligible recipients").

Board members and the three levels of government will receive improved project budget, schedule and risk reports, including new dashboard reports referred to under **Recommendation 3**.

In fall 2018, Waterfront Toronto improved the documentation related to its processes for the review of construction invoices, including timely site visits by project cost certifiers.

Waterfront Toronto is currently developing a file management and document retention policy and anticipates adoption of this policy on or before December 31, 2019.

Waterfront Toronto Not Financially Self-Sustaining as Mandate Anticipated

5. *To further develop the waterfront area in a financially self-sustaining manner, we recommend that Waterfront Toronto create and implement a plan for making revitalization self-sufficient, which could include leveraging private-sector funding and revenue-generating sources such as corporate partnerships and philanthropy.*

Waterfront Toronto Response: Waterfront Toronto supports the recommendation. Waterfront Toronto has outlined its objective to leverage private-sector funding, corporate partnerships and philanthropy in its Strategic Business Plan 2019–2023. During this five-year period, Waterfront Toronto will create and develop a plan for making revitalization self-sufficient and less reliant on government funding. In 2017, Waterfront Toronto received qualified donee status from the Canada Revenue Agency, which allows it to receive donations and issue tax receipts.

Intergovernmental Steering Committee Does Not Have a Project Decision-Making and Dispute Resolution Framework

6. *To have effective communication and decision-making processes in place to support future revitalization of the waterfront, we recommend that the Ministry of Infrastructure in conjunction with its partner governments:*
   - *develop a framework to guide project-funding decisions; and*
   - *establish a formal dispute resolution process.*

Ministry Response: The Ministry agrees that effective communication and decision-making processes are key to support the revitalization of the waterfront.

The three levels of government utilize an Intergovernmental Steering Committee to collaborate and co-ordinate project funding decisions. The Terms of Reference of the Intergovernmental Steering Committee guides the decision-making process. The decision-making has also been guided by the requirements stated in the legislation and Contribution Agreements.

The Intergovernmental Steering Committee also acts as the dispute resolution mechanism for issues related to the development of Toronto's waterfront.

Contribution Agreements for Waterfront Toronto projects contain measures to promote collaboration and procedures to resolve disputes.

The Port Lands flood protection project's Executive Steering Committee has also developed, in September 2017, dispute resolution mechanisms for issues specific to the delivery of the project and provides direction in relation to project management, planning and identified risks.

The Province is working with the government partners and Waterfront Toronto to develop an accord to strengthen accountability of each party and will consider these recommendations in the development of the accord.

Some Best Practices Not Part of Projects despite Multiple Overseas Trips to Learn About Waterfronts

7. *To successfully revitalize the remaining waterfront land, we recommend that Waterfront Toronto work with the three levels of government to consider incorporating in the Port Lands flood protection area and other projects best practices and lessons learned from past Waterfront Toronto revitalization projects, projects in other jurisdictions, and the features commonly associated with successful revitalization that Waterfront Toronto identified between 2003 and 2006 and in May 2018, such as large public spaces, more building height control, public access to the water's edge, festivals and cultural attractions.*

Waterfront Toronto Response: Waterfront Toronto supports the recommendation. Waterfront Toronto's current practice is to complete a lessons learned (post-mortem) workshop at the end of each major project, with the objective to apply those lessons to future projects.

As Waterfront Toronto develops its future strategic and annual corporate plans, it will incorporate the relevant and appropriate features commonly associated with successful waterfront revitalization.

Performance Measures and Targets Not Established

8. *In order for the three governments to be able to monitor and assess the progress and performance of Waterfront Toronto and its future revitalization projects in the Port Lands and other projects, we recommend that the Ministry of Infrastructure, in conjunction with its partner governments and the Intergovernmental Steering Committee:*
   - *develop a set of performance measures and targets that are linked to Waterfront Toronto's legislated objectives;*
   - *require Waterfront Toronto to publicly report on its performance against the targets set in these objectives at least annually; and*
   - *regularly encourage public input from the broader population, not just local waterfront residents, into the development of the waterfront area.*

Ministry Response: The Ministry of Infrastructure agrees that per-formance measures are essential to the monitoring and assessment of projects.

The Province is currently working with its government partners and Waterfront Toronto to develop an accord to strengthen accountability of each party and will further consider how to address the

recommendation of the Auditor General, including performance measures and targets that are linked to Waterfront Toronto's legislative objectives, public reporting and engagement.

The Province, along with its government partners, is working with Waterfront Toronto as it develops performance measures linked to its legislative objectives through its 2019–23 Strategic Business Plan.

Port Lands Flood Protection

Planning and Development of the Port Lands

9. *To manage the development of the Port Lands with due regard for economy, we recommend that Waterfront Toronto:*
   - *produce detailed construction cost estimates for each of the 23 component projects of the flood protection for review by the funding governments;*
   - *report quarterly on progress against these budgets; and*
   - *assess the effectiveness of its work on reducing the impact of construction risks, which could otherwise increase the final cost of flood protection.*

Waterfront Toronto Response: Waterfront Toronto supports the recommendation. Waterfront Toronto has completed detailed construction cost estimates for each of the 23 component projects to a 30% design drawing level. These estimates will be reviewed by the funding governments through the Port Lands Executive Steering Committee and Infrastructure Canada Port Lands Project Oversight Committee in accordance with the terms of the tri-partite contribution agreement.

Through its dashboard reporting framework, Waterfront Toronto will formally report on progress against these budgets on a monthly basis and will provide this information to the Waterfront Toronto Board and three levels of government on at least a quarterly basis. Waterfront Toronto has engaged a third-party expert risk consultant for the Port Lands flood protection project whose responsibility is to document and assess the impact of construction risks on the project. Waterfront Toronto management and the entire project team, with support of a Capital Peer Review Panel, identify and review project risks on a monthly basis. Through this process, mitigation strategies are identified to reduce the impact of construction risks on the project.

Smart City Project with Sidewalk Labs

Waterfront Toronto Enters into Agreements with Sidewalk Labs without Sufficient Due Diligence and Provincial Involvement; Further Questions Remain about the Smart City Project after the Second Agreement

10. *It is important to protect the public interest and ensure responsible and transparent integration of new digital technology within urban design when creating a mixed-used smart city. Due to the nature, complexity and potential long-term impacts from the initial establishment of digital data infrastructure planned for Toronto's waterfront in the form of a smart city (the first of its kind in Canada), we recommend that the provincial government, in consultation with partner governments:*

- *conduct further study on the activities of Waterfront Toronto and Sidewalk Labs in the planning and development of the smart city in Quayside and the broader waterfront area;*
- *reassess whether it is appropriate for Waterfront Toronto to act on its own initiative in making commitments and finalizing a long-term partnership arrangement with Sidewalk Labs or whether a separate governance structure is needed that allows for more direct provincial oversight;*
- *establish an advisory council comprised of smart city/digital data infrastructure experts (e.g., information technology, privacy, legal, consumer protection, infrastructure development, intellectual property and economic development) to provide proactive advice on the development of a policy framework to guide the establishment of a smart city in Ontario;*
- *conduct public consultations to consider in the development of a policy framework for a smart city in Ontario;*
- *consult throughout government on the roles and responsibilities government ministries and agencies could have during the development, implementation and operation of a smart city;*
- *to protect the public's interest, establish the policy framework, through legislation, for the development of a smart city in Ontario that addresses: intellectual property; data collection, ownership, security and privacy; legal; consumer protection issues, infrastructure development and economic development; and*
- *communicate openly and transparently with the public on what to expect from a smart city project.*

Ministry Response: The Ministry welcomes the recommendation from the Auditor General and is committed to protecting the personal privacy of Ontarians. The Province recognizes the importance of the issues and concerns around digital governance and data privacy.

Although Digital Governance Framework Principles have been included in the Plan Development Agreement between Waterfront Toronto and Sidewalk Labs, we acknowledge that there are broader public interest issues around privacy, legal, consumer protection, infrastructure development and intellectual property that could arise from the creation of the first smart city in Canada that the Province needs to study from a provincial government policy framework perspective.

Waterfront Toronto has indicated that it plans to enter into a Master Innovation and Development Plan (MIDP) with Sidewalk Labs in 2019. The Province will work in conjunction with its partner governments to study the issues surrounding the creation of a smart city in Toronto to determine whether any new or amended provincial and/or federal legislation and/or municipal bylaws and/or government policies will be needed to protect the public interest prior to the MIDP being signed.

December 6, 2018



WATERFRONToronto

Waterfront Toronto / Rolling Five-Year Strategic Plan / Past · Present · Future

The Opportunity for Toronto, Ontario, and Canada

Toronto is at a critical juncture. It has a strong and diversified economy, a thriving cultural life, and has earned a growing international reputation as a welcoming destination for visitors and new immigrants. At the same time, like other cities around the world Toronto is working to address an array of challenges associated with economic inequality, affordability, mobility and environmental sustainability.

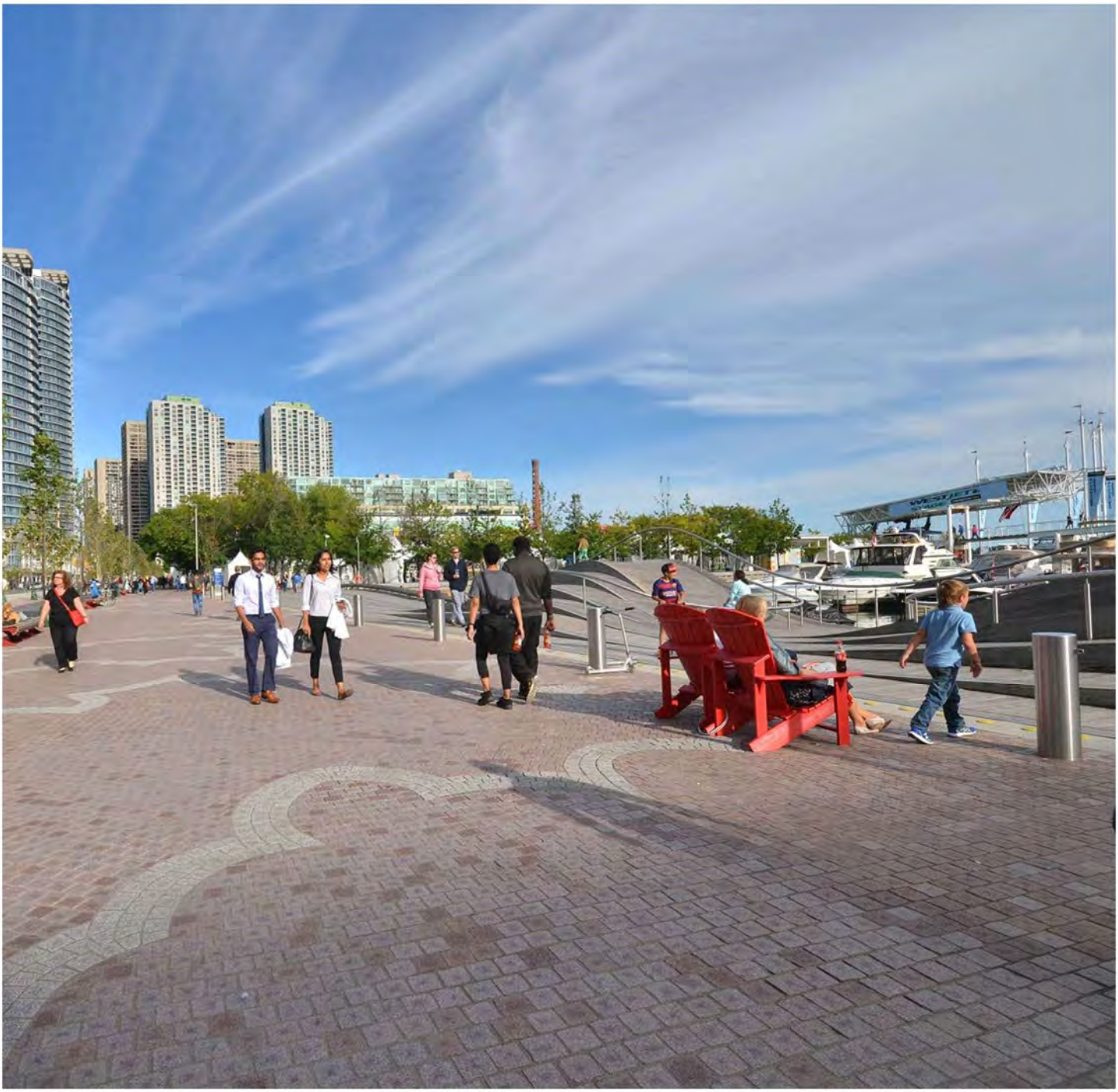
The challenges many cities face today are products of their growth and success. Urbanization is major a global trend: 55% of humanity already lives in cities, and the UN projects that this figure will reach 68% by 2050. The Greater Toronto Area is home to nearly half of Ontarians (48.3%), a share that's expected to keep growing. Toronto's assets and systems —from housing to roads to transit—are strained precisely because so many people want to live and work here.

In addition to facing challenges associated with its growth, Toronto is navigating trends that are shaping life across many jurisdictions. Toronto's neighbourhoods have become more fractured along lines of income and identity. Opportunities related to technological and economic change have been unevenly distributed. Variations in social capital and trust leave some residents at increased risk of isolation. And extreme weather is becoming more frequent, raising concerns about the resilience of our built environment.

Over the next five years, Toronto—and by extension Ontario and Canada, whose economies and reputations are tied to their largest city—has an opportunity to address some of the pressing urban problems of our time, growing economically while thriving socially and culturally. The waterfront is the place where communities and city-builders are bringing some of their best ideas to life. The past 15 years have shown that with meaningful public engagement as well as thoughtful leadership and investment, urban places can be transformed from sites of industrial aftermath to centres of economic, social and cultural success.

Today, with government partners and other stakeholders, Waterfront Toronto is working to build a connected waterfront that belongs to everyone: a leading example of innovative and inclusive urban design, a magnet for investment and job creation, and a source of pride and inspiration for Canadians.

To create a waterfront that supports the outcomes that matter to Canadians we're thinking and building at the intersections of innovation and job creation, city-building and public good.



Located at the heads of three slips along Queens Quay, the WaveDecks are functional urban docks that have helped to turn a cramped sidewalk into a generous, accessible public promenade. Since they opened in 2008, the WaveDecks have earned nine urban design awards.

CONTENTS

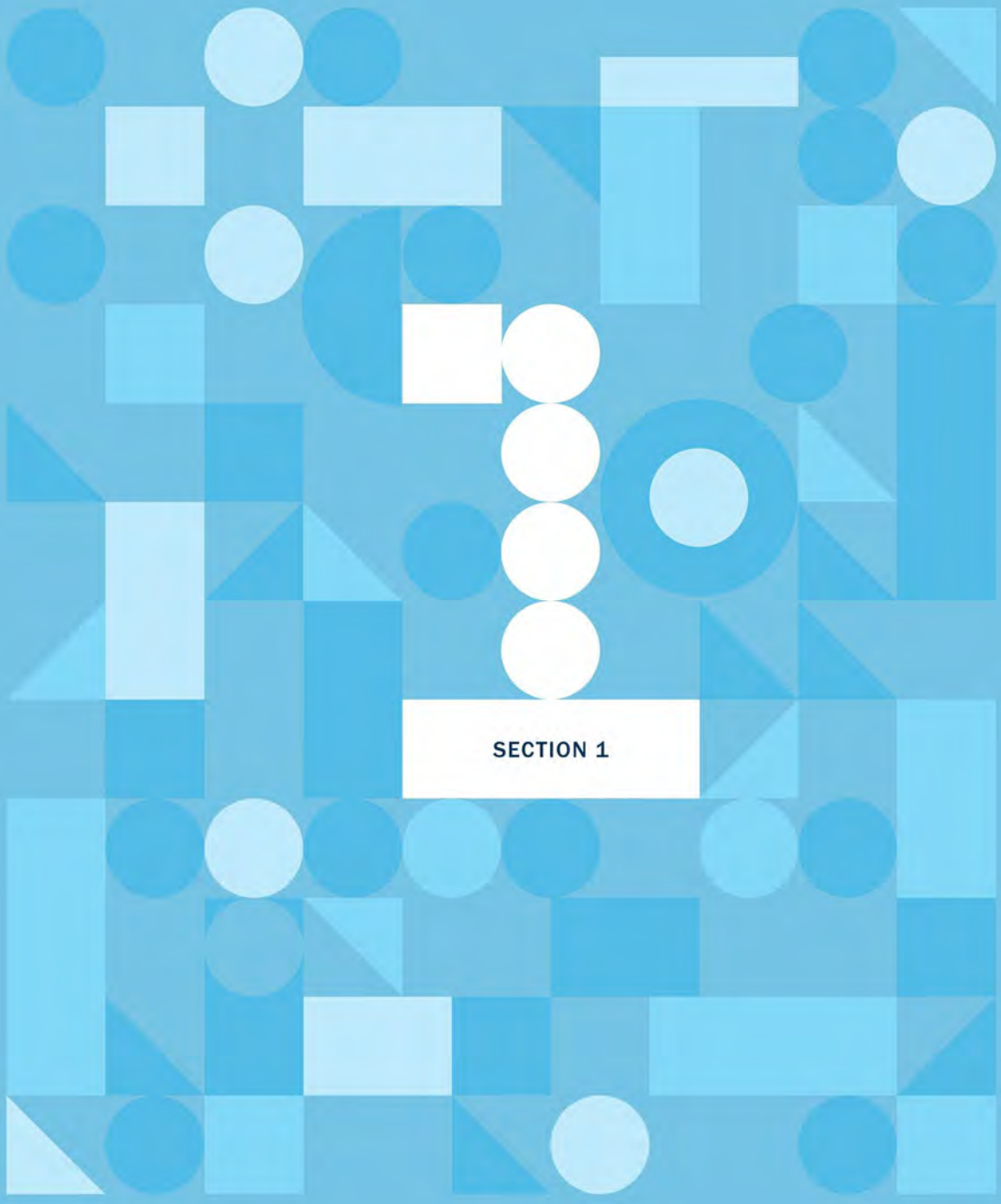
SECTION 1 /
The Waterfront Story So Far 4

SECTION 2 /
Executive Summary 16

SECTION 3 /
Who We Are and How We Work 24

SECTION 4 /
Our Plan for 2019/20–2023/24 38

SECTION 5 /
Financials and Performance Measurement / Appendices 1-3 58


SECTION 1

Waterfront Toronto came together in 2001 to tackle big issues along the waterfront that only powerful collaboration across all three orders of government could solve.

The governments of Toronto, Ontario and Canada laid out a clear and ambitious mandate for Waterfront Toronto: to enhance the economic, social and cultural value of waterfront lands, and to create an accessible and active waterfront for living, working and recreation. Governments directed Waterfront Toronto to deliver these outcomes with a high degree of fiscal and environmental responsibility; in partnership with the private sector; with active public engagement and participation; and in a way that would ultimately make the continued growth and revitalization of the waterfront self-sustaining.

The pages that follow offer an overview of our work to date, and the substantial progress we've made in transforming the lands by the lake into one vibrant and connected waterfront that belongs to everyone.

New Neighbourhoods

The West Don Lands, pictured here, is one of several new neighbourhoods whose development Waterfront Toronto has enabled.

In 2001, this 32-hectare tract of land was underutilized, and contaminated from past industrial use. We began by remediating the soil and crafting a community-informed master plan for the area, including plans for high-quality infrastructure and public spaces. This foundational work made the West Don Lands an attractive target for private-sector investment, enabling us to take parcels of land to market and earn a profit for taxpayers.

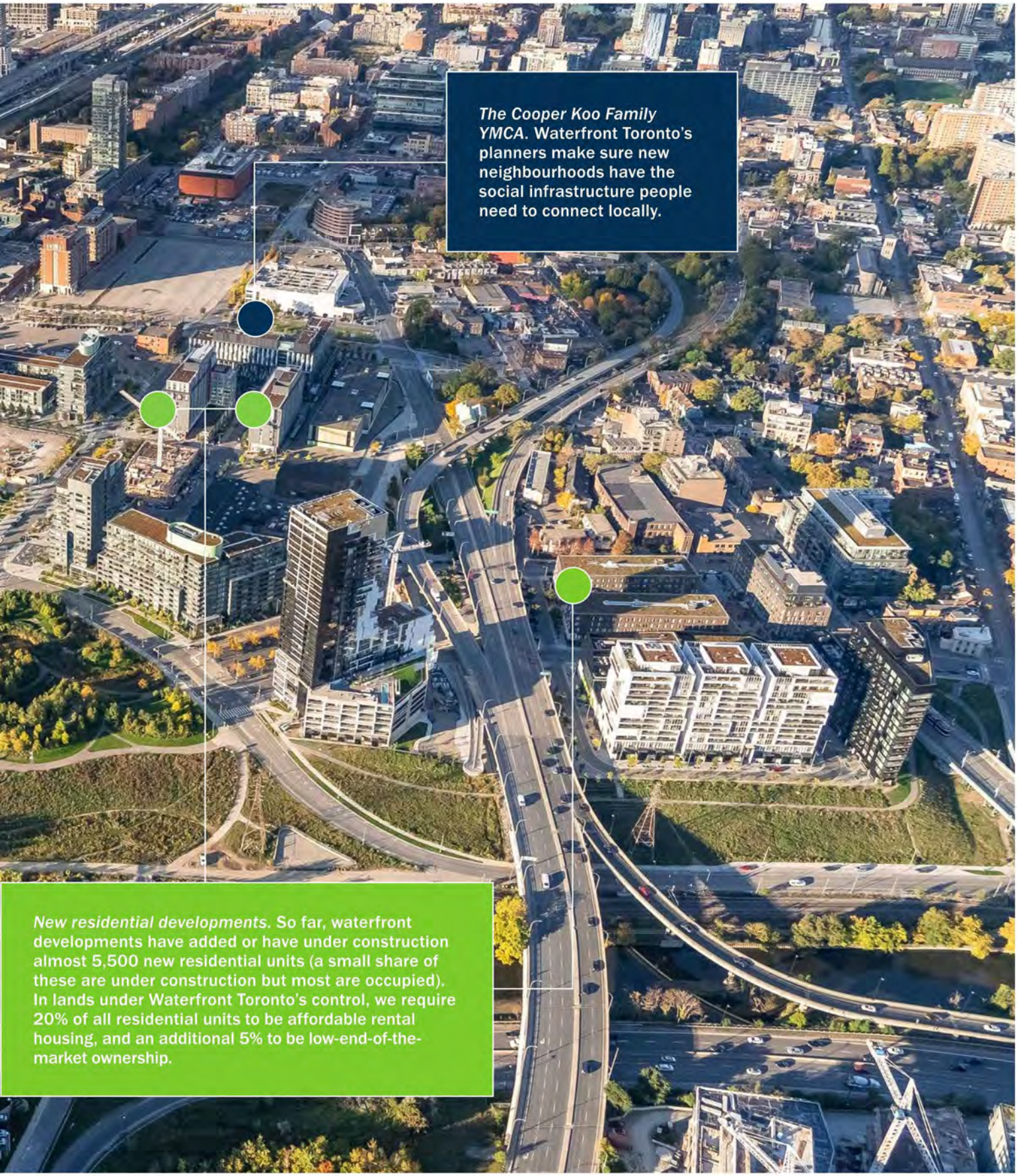
As private developers got to work on new residential and commercial buildings—designed and constructed according to our rigorous sustainability requirements—Waterfront Toronto partnered with Infrastructure Ontario and others to make sure the neighbourhood would include affordable housing, social services, and neighbourhood assets—in this case a YMCA.

Today, this area is home to thousands of people and many successful local businesses. In 2017/18 the West Don Lands won an Urban Land Institute Global Award for Excellence and was praised as, "a global showcase of city-building...that's for and about the people it serves."



Public transit on Cherry Street. Transit and active transportation are priorities in our neighbourhood planning. We aim to situate transit stops no more than 500 metres from residential developments and major workplaces.

Corktown Common. This active park has been hailed as "Toronto's best new public space." Since 2003, Waterfront Toronto has created 25 hectares of new parks and public spaces.



The Cooper Koo Family YMCA. Waterfront Toronto's planners make sure new neighbourhoods have the social infrastructure people need to connect locally.

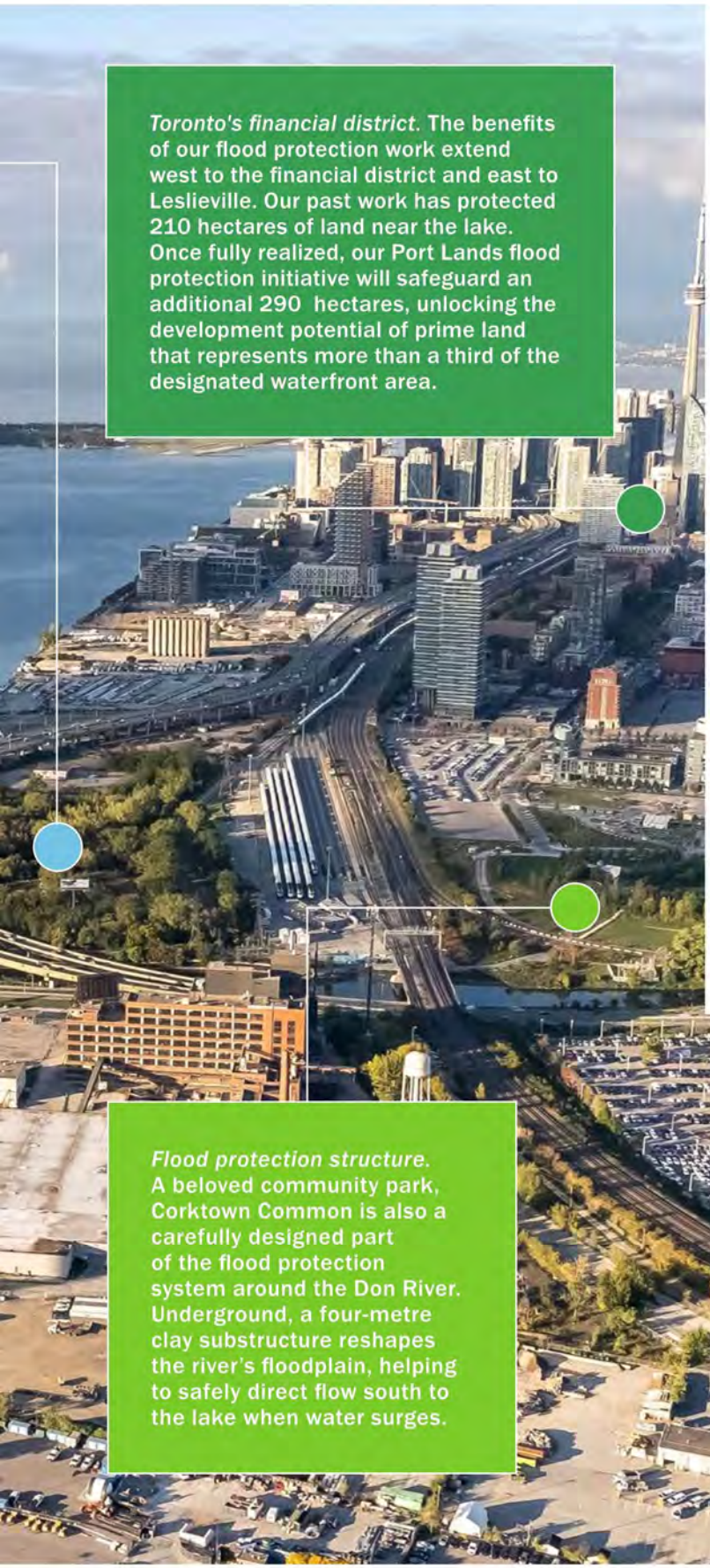
New residential developments. So far, waterfront developments have added or have under construction almost 5,500 new residential units (a small share of these are under construction but most are occupied). In lands under Waterfront Toronto's control, we require 20% of all residential units to be affordable rental housing, and an additional 5% to be low-end-of-the-market ownership.



Underground stormwater infrastructure. Waterfront Toronto has added more than 11 kilometres of stormwater sewers, as well as 17.7 kilometres of sanitary sewers and watermains, to lakeside districts.

Site of lakefilling operations connected to Villiers Island. The creation of Villiers Island and related works are some of Canada's largest ever infrastructure initiatives. Waterfront Toronto has developed a community benefits plan that ensures these major public investments will do double duty: flood protecting the city while fuelling lasting and inclusive economic development by providing opportunities to people who face barriers to employment.

The Cherry Street Stormwater Management Facility. Slated for completion in 2020, this will be a state-of-the-science treatment plant that protects local ecosystems by treating runoff before it enters the lake. The treatment system will remove oil and sediment, and use ultraviolet light to disrupt harmful bacteria.



Toronto's financial district. The benefits of our flood protection work extend west to the financial district and east to Leslieville. Our past work has protected 210 hectares of land near the lake. Once fully realized, our Port Lands flood protection initiative will safeguard an additional 290 hectares, unlocking the development potential of prime land that represents more than a third of the designated waterfront area.

Flood Protection and Infrastructure

Waterfront Toronto was created to unlock the extraordinary potential of the lands along the lake. Flood protection is an essential part of that mission.

As extreme weather becomes more frequent, protecting the city from surging water is becoming an even more urgent imperative. Through Waterfront Toronto, the governments of Toronto, Ontario and Canada are investing to meet this challenge for the benefit of homeowners, businesses, neighbourhoods and the wider economy.

We've already made significant progress, delivering a critical flood protection landform at Corktown Common (see image). Our most substantial project, the Port Lands flood protection initiative, got underway in 2017 with a $1.25 billion contribution from the three orders of government. It's expected to be completed in 2023/24.

In addition to protecting the city from flooding, we're adding important infrastructure to manage stormwater —creating channels that allow high volumes of runoff to flow safely away from neighbourhoods while protecting the health of the lake.

Flood protection structure. A beloved community park, Corktown Common is also a carefully designed part of the flood protection system around the Don River. Underground, a four-metre clay substructure reshapes the river's floodplain, helping to safely direct flow south to the lake when water surges.

Attracting Investment

When Waterfront Toronto was created, the governments of Toronto, Ontario, and Canada pooled $1.2 billion in seed capital to fuel an extensive program of waterfront revitalization. The goal was to unlock the latent value of prime lands along the lake—to build prosperity and enhance quality of life.

East Bayfront, the 23-hectare development pictured here, is just one area where we created the conditions for major job-creators and post-secondary institutions to locate on waterfront lands, activating an underutilized area and building momentum for further investment.

We've attracted developers, private firms and institutions by doing essential foundational work, like crafting excellent master plans, carrying out environmental remediation and flood protection work, and collaborating on key civic infrastructure. With strong partnerships across all three levels of government, Waterfront Toronto has been uniquely equipped to solve complex city-building challenges and move revitalization forward.

Government investments in Waterfront Toronto have realized over $10 billion in new-private sector investment. The return on public sector investment has been $4.1 billion in total economic output to the Canadian economy.



Landmark development. Monde is the first residential project renowned architect Moshe Safdie has created in Canada since Habitat '67. Since 2000, nearly 50 major developments have been launched in waterfront districts.

Future site of the Waterfront Innovation Centre. Developed by Menkes and designed by architects Sweeny & Co, the facility's lead tenants are WPP, a global leader in communications services, and MaRS, one of the world's largest urban innovation hubs.Waterfront revitalization has created more than 14,100 years of full-time employment in fields like architecture, construction and project management.



George Brown College's Waterfront Campus. In addition to classrooms, labs, and collaborative spaces, the Daphne Cockwell Centre for Health Sciences—promoted by the College as "one of the city's most architecturally striking learning environments, overlooking the Toronto harbour"—includes dental, hearing and other community health clinics that let students work with real patients in a supervised setting.

The headquarters of Corus Entertainment. High-quality infrastructure is one factor that's attracting major employers to waterfront districts. For instance, our partner Beanfield Metroconnect has used fibre optic technology to build Canada's first open-access ultra-high-speed broadband network, which makes internet speeds in waterfront precincts much faster than the North American average.



We led the transformation of Queens Quay from an unfriendly arterial road with ageing infrastructure to a balanced, modern street that invites people to enjoy the lakeshore. Today the area has updated infrastructure underground, more than 150 new trees, a generous granite sidewalk and still plenty of room for cars and light rail transit.

Waterfront Access and Connections

Providing safe and easy access to the shores of Lake Ontario is an important part of our work. To date, we've created over 13 kilometres of trails and promenades in key areas of the waterfront, as well as a range of parks and public spaces that facilitates active transportation and make it more fun for people to move through the city toward the water.

Every public space we create or redevelop is accessible according to the Access for Ontarians with Disabilities Act (AODA). This includes recreational trails and beach access routes, outdoor eating areas, outdoor play spaces, parking areas, service counters and other amenities.

In addition to making the water's edge more accessible to everyone, we ensure that new waterfront neighbourhoods are connected to the fabric of the city—with roads, transit service and active transportation routes. These links support the success of local businesses, make the waterfront a better place to live and help realize the vision of one connected waterfront that belongs to everyone.

- **We partnered with the City of Toronto to deliver The Bentway. In addition to providing new recreational space under the Gardiner Expressway, this linear park makes it easier and more pleasant to get to and from the lake on foot or by bike.**
- **The Queens Quay streetcar line is a key transit link to and across the waterfront. We've partnered actively with the City of Toronto, the TTC, and others to plan for intensified transit connectivity along the lake. Some new routes are already active, and bigger changes, like the East Harbour Transit Hub, are coming.**
- **The Outer Harbour Recreational Node, created in 2015, is a thoughtfully constructed outcropping that offers an accessible space for fishing, birdwatching and simply enjoying nature. We connected it to the Martin Goodman Trail, and made shoreline improvements to offer better habitat for fish, amphibians and native plants.**
- **The Martin Goodman Trail, which runs parallel to this stretch of Queens Quay, is a favourite route for cyclists and joggers. Waterfront Toronto has added more than 5,800 linear metres to the trail.**

Whether in parks, on beaches, or along public promenades, Waterfront Toronto has created more than 13 new linear kilometres of public waterfront access—like this stretch of the Water's Edge Promenade.



Sustainability

Sustainability and resilience are at the heart of Waterfront Toronto's mandate and approach. In every project we deliver, we strive for a win-win: a lakeshore that supports a thriving city while sustaining healthy ecosystems.

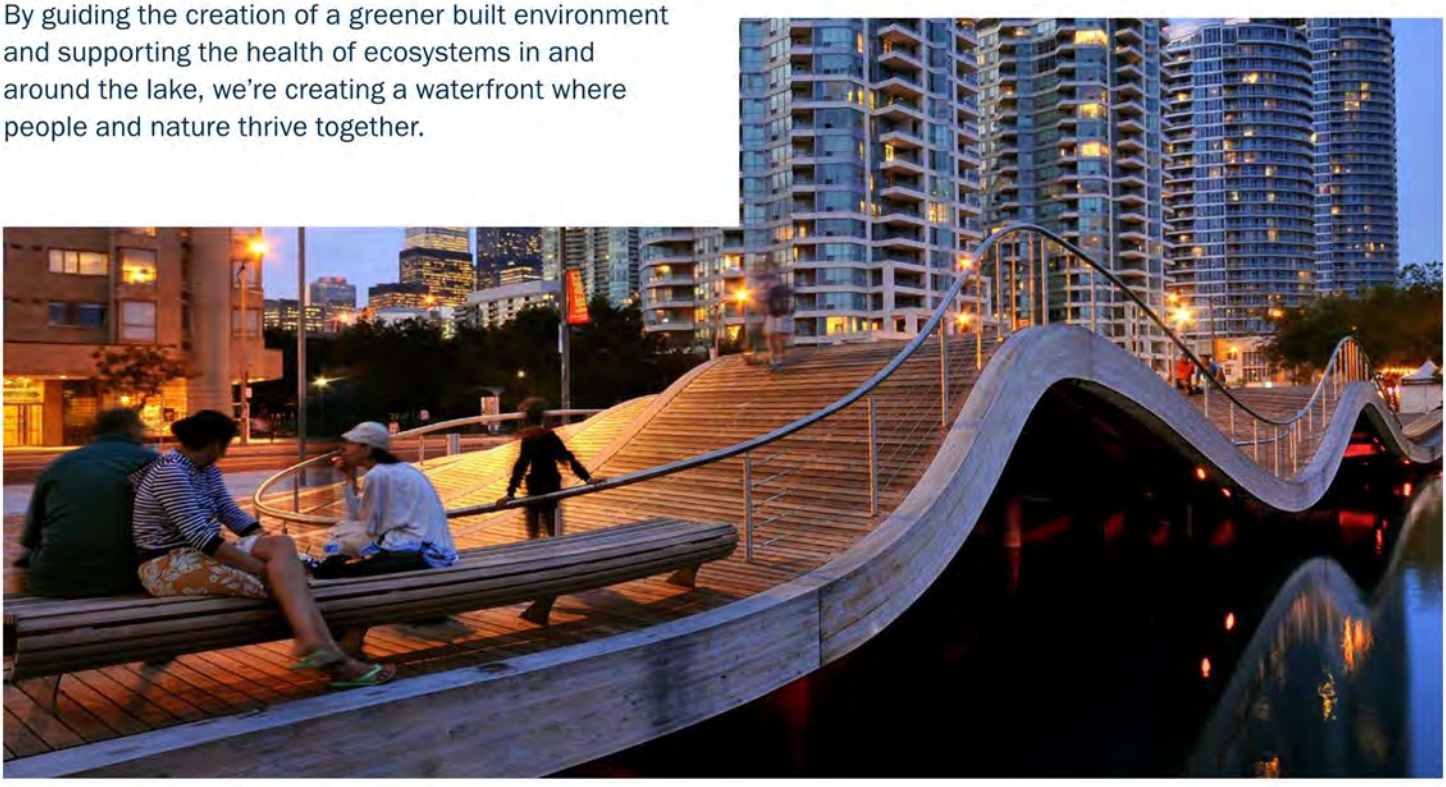
Our Minimum Green Building Requirements, which have guided the development of all new buildings on lands under our stewardship, have resulted in neighbourhoods with exceptional performance in energy consumption, low carbon emissions and reduced waste generation. Developments constructed in line with our standards have also realized 40% energy cost savings.

We've addressed contamination risk in more than 65 hectares of soil, supported the development of a healthy tree canopy and improved plant and wildlife diversity on land with carefully planned parks. Our work has also supported biodiversity in the water: we've enhanced over 118,000 square metres of marine habitat and carried out extensive shoreline remediation to create more supportive environments for fish and amphibians.

By guiding the creation of a greener built environment and supporting the health of ecosystems in and around the lake, we're creating a waterfront where people and nature thrive together.

Trees on the Water's Edge Promenade, like hundreds of others across the waterfront, benefit from soil cell technology. Soil cells are composed of a tiered web of rigid boxes that prevent soil from compacting under the weight of city pavement. When revitalization is complete, all waterfront trees that don't live in parks—about 16,800 of them—will have soil-cell technology to help their roots to spread and thrive, keeping them healthy as they grow to full maturity.

Aqualina at Bayside, a Tridel development, is a landmark in sustainable residential development. It's pursuing LEED Platinum certification and will include a Net-Zero Dwelling: a distinction units can earn when 100% of their energy is supplied by zero-carbon, on-site renewable sources. Waterfront Toronto's green building standards, which have supported a culture of sustainable design in lakeside districts, have been honoured with one of the field's most prestigious awards: the Globe Award for Environmental Excellence in Urban Sustainability.







BELOW: *In addition to providing flood protection and amenities that enhance neighbourhood life—like an athletic field and a splash pad—the 7.3 hectare Corktown Common includes an extensive landscape of marshes, prairies and woodlands to promote biodiversity. Its plants are 95% native and Toronto-adapted species. The parks ecological richness has created a welcoming environment for wildlife and migratory birds.*

LEFT: *When we built the WaveDecks, we enhanced the marine habitat underneath by installing a variety of structures such as river-stone shoals, boulders, root balls and logs. These structures support plant growth and increase shelter and foraging opportunities. The number and diversity of fish species in the area have increased markedly over the last decade.*


SECTION 2

Toronto is attracting growing international attention as an open, safe and inclusive city filled with opportunity. The next five years will be a defining time for Toronto —and the waterfront can be a place that embodies the city's values and ambitions, while communicating a unique identity to the world. Waterfront Toronto's government partners have an opportunity to harness growing development momentum in one of the world's most promising city-building landscapes, fuelling economic growth and innovation while prioritizing inclusion, enhancing quality of life and setting new standards in sustainability.

This plan describes how Waterfront Toronto proposes to extend its record of success, working with our stakeholders and the public to realize the next phase in a revitalization process that's already begun to establish the waterfront as a magnet for investment and jobs; a model for inclusive urban design and development; and a source of pride for Canadians.



"The Water Guardians," by Jennifer Marman and Daniel Borins, one of eight permanent public art installations in waterfront districts. While the strength of our public art program attracts outstanding artists from across Canada and around the world, all of our commissions to date have been fabricated in Ontario.

In 2001, the governments of Toronto, Ontario and Canada laid out a clear and ambitious mandate for Waterfront Toronto: to enhance the economic, social and cultural value of waterfront lands and to create an accessible and active waterfront for living, working and recreation.

Our Record and Approach

Since 2001, Waterfront Toronto has catalyzed the revitalization of nearly 100 hectares of land along the lake. Our work has added 25 hectares of new parks and public spaces, 13 kilometres of trails and promenades by the lake, roughly 5,500 new downtown housing units (nearly 600 of them affordable), and attracted $10 billion in private-sector investment to waterfront districts, which has meant more than 14,100 years of full-time employment. With Port Lands flood protection underway, an additional 290 hectares of waterfront land will soon be unlocked for development—adding to the 210 hectares our past flood protection work has already safeguarded.

Waterfront Toronto has achieved these results through its distinct value-creation model and by playing a unique role in Toronto's development ecosystem, as a master planner, master developer, innovation partner, capital connector and trusted public steward. Throughout its history, Waterfront Toronto has built a reputation for meaningful public consultation, for fiscal responsibility and accountability, and for leading the way on sustainability and resilience in the built environment.

Our Plan for 2019/20–2023/24

Core Commitments That Guide Our Work

Waterfront Toronto envisions a connected waterfront that belongs to everyone. Work over the next five years will be grounded in three core commitments that advance our vision.

City-building. We will continue to contribute to the urgent global conversation about how to create better cities by addressing issues like affordability, mobility, connectivity and sustainability.

Innovation and job creation. We will continue to use smart planning and effective partnerships to create jobs and unlock even more of the enormous economic value of the waterfront.

The public good. We will continue to work in a transparent and accountable way while actively seeking public input to ensure that we're improving quality of life through every project we deliver.

Enabling Factors That Support the Delivery of Our Plan

A new enabler, to fuel our plan and strengthen our organization

Increased capacity related to philanthropy and partnerships. Waterfront Toronto plans to develop new capacity in fundraising and partnerships beginning in fiscal 2019/20, understanding that philanthropy poses new opportunities as well as challenges, including significant resource implications for Waterfront Toronto. The Corporation obtained Qualified Donee status from the Canada Revenue Agency in 2017, which enables us to work alongside our partners at the City of Toronto to connect with institutions and private donors seeking to direct philanthropic investments toward civic placemaking projects and the public realm.

Existing enablers that are important to the delivery of our plan

Governance. Waterfront Toronto has always benefited from collaboration among the three governments. Over the next five years, continued coordination among governments across the range of mission-critical issues will strengthen Waterfront Toronto's ability to deliver this plan.

Borrowing powers. Our access to a $40 million credit facility is a key financial foundation of this strategic plan, as it enables us to optimize cashflow throughout multiple project lifecycles. This is an important capability because the timing of the funding and/or revenues we receive and the infrastructure investments we need to make do not always coincide. Waterfront Toronto will continue to use our borrowing access responsibly, with full accountability to governments.

The Next Phase in Waterfront Revitalization: Projects 2019/20–2023/24

Over the next five years—in keeping with our mandate, guided by our core commitments and supported by the three enabling factors described above — Waterfront Toronto plans to deliver a portfolio of projects that represent the next phase in the revitalization of Toronto's waterfront. These projects, which harness a combined investment of $1.5 billion over five years, are oriented toward expanding economic opportunity and increasing connectedness and mobility around the entire perimeter of Toronto Harbour: creating new destinations, a more seamless pedestrian experience and a more robust waterborne transportation system.



Waterfront Toronto's public consultation approach is designed to provide all participants with a realistic understanding of the goals of the process, how decisions will be made and the impact of their participation.





Sherbourne Common is the first park in Canada to integrate an ultraviolet (UV) facility for neighbourhood-wide stormwater treatment into its design. Collected stormwater is treated in an underground UV facility and released from three art sculptures into this 240-metre urban river channel. It flows across the length of the 1.5-hectare park and safely into Lake Ontario.

Priority Projects

The Port Lands Flood Protection. Enabled by a combined $1.25 billion investment from the governments of Toronto, Ontario and Canada, this work will protect large areas of the city from flooding and unlock the development potential of 290 hectares of prime land.

Complete Communities. Through activities like master planning and infrastructure development, Waterfront Toronto will continue to ensure that the large parcels of land available for development by the lake are transformed into thriving neighbourhoods.

Public Places. Waterfront Toronto will complete work on three new waterfront parks, extend the Water's Edge Promenade and continue to work toward an increasingly vibrant public realm—including the ongoing development of our internationally recognized public art program.

These three projects have funding commitments in place and work underway. We project that work on Waterfront Toronto's Priority Projects will be 98% complete by the conclusion of this plan at the end of fiscal 2023/24.

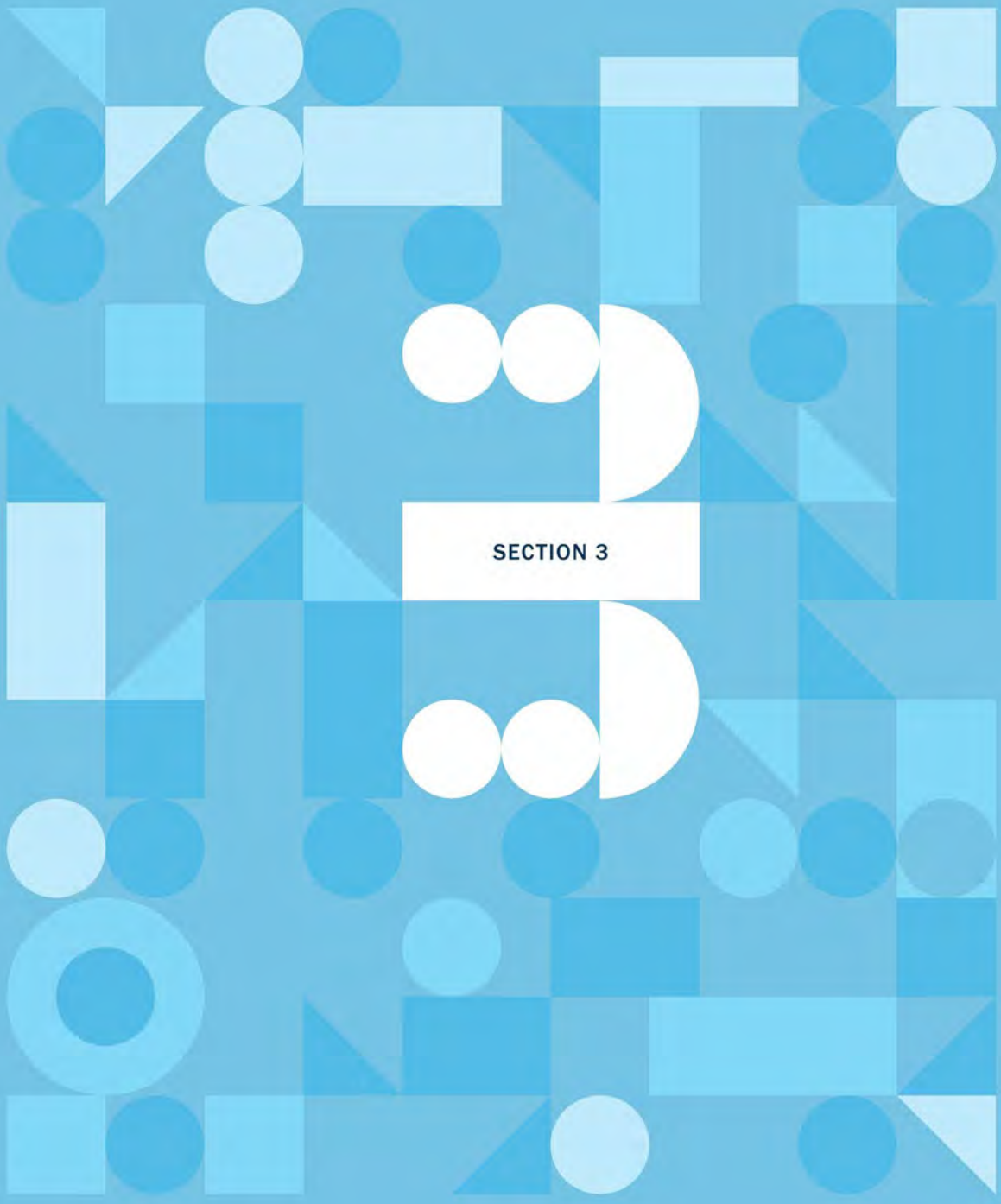
New Potential Projects

In partnership with other public entities, private philanthropists and the public, Waterfront Toronto will carry out due diligence to test the feasibility of four new projects that are currently unfunded:

- A continuous Waterfront Walk that offers a seamless pedestrian experience by the lake
- A new Signature Structure to capture Toronto's identity and anchor an economic cluster
- An enhanced Jack Layton Ferry Terminal and Harbour Square Park
- A Destination Playground offering children immersive, nature-focused play

Moving Ahead

The plan that follows is a rolling five-year strategic business plan that will be updated annually as its projects evolve alongside regulatory, funding and other factors. Waterfront Toronto will maintain its accountability for the initiatives laid out in this plan and for the stewardship of the public resources entrusted to it. Details regarding funding and Waterfront Toronto's framework to track its performance in delivering on public investments are included in the final section of this plan.


SECTION 3

Waterfront Toronto plays a unique role in Toronto's development ecosystem. As a tri-government organization, we were built to collaborate—and we work effectively with a wide range of partners, from private developers and conservationists to community groups and social service agencies. This section provides an overview of how we create value for the public by catalyzing the development of underutilized lands. It describes our mandate, track record and core capabilities, and the mechanisms that help us meet high standards of transparency and accountability as we manage substantial public investments in waterfront revitalization projects. The pages that follow also articulate our work and philosophy when it comes to ensuring the public is meaningfully consulted in our planning, policy and design processes.

Mission & Mandate

Who We Are
Waterfront Toronto is working to create a vibrant, connected waterfront that belongs to everyone. As city-builders, we care about creating neighbourhoods, parks, destinations and infrastructure that makes people's lives better.

Mandate
Our organization was established in 2001 by the Government of Canada, the Province of Ontario and the City of Toronto to unlock the social, cultural and economic potential of the waterfront. Our mandate has been to apply best practices in urban revitalization—from infrastructure and new technology to leading strategies in design and sustainable development —to over 800 hectares of underutilized land along Lake Ontario.

Record
So far, we've led or catalyzed 2.5 million square feet of development along the waterfront, adding affordable housing, commercial space, aquatic habitat, critical infrastructure and beloved public spaces. Our projects have included the West Don Lands, Corktown Common, Underpass Park. Sugar Beach, Sherbourne Common, Queens Quay, East Bayfront, the Port Lands, Jack Layton Ferry Terminal and The Bentway.

What We've Realized So Far



5,500
downtown homes
(600 of them affordable)



1.5mil
square feet of commercial development along the waterfront



8
public art installations



13km
of walkable space along the water



5km
in cycling connections



25ha
of cherished parks and public space



Waterfront Toronto team members prepare to host a game about great public spaces at the Christie Pits Film Festival. Our public consultation work goes far beyond what's legally required for public projects: we engage residents and other stakeholders early, so there's time to truly understand and incorporate their insights to improve the quality and relevance of our projects.

Public Engagement: A Commitment to Transparency & Accountability

Since its creation, Waterfront Toronto has prioritized the role of public consultation in revitalizing the waterfront. We work collaboratively with individuals, communities and our partner organizations across the GTA to generate new ideas, solve problems and meaningfully incorporate the knowledge and lived experience of the public into our planning, policy, and design processes. We believe community engagement must be conducted in a clear, transparent manner that provides all participants with a realistic understanding of the goals of the process, how decisions will be made and the impact of their participation.

Our Guiding Principles Are:

Act with Clarity and Purpose
We act with purpose, communicate our goals with accuracy and we are honest with stakeholders about their impact on the decision-making process.

Commit to an Ongoing Process
We acknowledge that engagement is an ongoing process of dialogue, dissent, consensus building and learning. We continuously evaluate our approaches, maintain a sustained dialogue with our partners and revisit our assumptions to ensure we are achieving our goals.

Support Diversity and Inclusion
We work hard to eliminate barriers to participation and to ensure representative, diverse and inclusive engagement.

Cultivate Collaboration
We recognize that city-building is a shared responsibility that requires coordinated efforts. We are committed to sharing knowledge, decision-making and resources.

Waterfront Toronto Spectrum of Engagement

To keep pace with new standards of engagement, Waterfront Toronto has expanded its approach to ensure that the public is given an even greater opportunity to provide meaningful feedback on projects. In keeping with recognized international best practice, we've recently adopted a spectrum of engagement with categories added for "listening" and "co-creation." These new categories respond to the increasing need for people to be heard and actively involved in the creation of planning and development processes.

We currently plan, deliver and synthesize a range of public feedback opportunities that include: digital surveys, focus groups, advisory committees, community information and feedback sessions, "pop up" community activations, person-on-the-street intercepts, comment walls, questionnaires, townhalls, walking tours, newsletters, dedicated project websites, creative programming, outreach on social media and public roundtables. After every formal community consultation, we report back to participants on how their feedback was incorporated into the overall plans through our meeting summaries, websites, blogs and newsletters.



Inform	Listen	Involve	Co-Create	Empower
Provide the public with balanced and objective information to assist them in understanding problems, alternatives or solutions.	Gather public feedback on analysis, alternatives or decisions, but also collect ideas, stories and concerns.	Work directly with the public throughout the process to ensure everyone involved is consistently understood and considered.	Partner with the public in each aspect of the development including the creation of options and the identification of preferred solutions.	Provide support and resources to allow the public to make final decisions.

Core Capabilities

Our mandate lays out a distinct and multi-faceted role for Waterfront Toronto. We work as master planners, master developers, innovation leaders, trusted public stewards and capital connectors. No other organization in the development ecosystem brings together this unique combination of core capabilities.

01

Master Planner / Waterfront Toronto is a leader in city-building. Our integrated approach to planning and design has laid the foundations for successful neighbourhoods, thriving local economies and vibrant public spaces. Design excellence combined with thoughtful planning and an iterative process that involves the public has enabled groundbreaking, win-win solutions in waterfront districts.

02

Master Developer / As a development partner, Waterfront Toronto is uniquely able to work with public officials and regulators to develop innovative solutions that build prosperity while protecting the environment and the public interest. For instance, in the West Don Lands, Waterfront Toronto worked with Infrastructure Ontario and Toronto Region Conservation Authority to find a way to develop River City in concert with flood protection infrastructure—resulting in a vibrant neighbourhood in an area that had previously been closed to development due to flood risks.

03

Innovation Leader / Since its inception, Waterfront Toronto has emphasized innovation. We source and curate leading-edge materials, processes, and technologies—and we apply the most effective solutions to every project delivered on the waterfront. From green building standards that have been recognized internationally to the first ultra-high-speed broadband network in Canada (delivered with our partners Beanfield Metroconnect), we ensure that waterfront developments lead the way.

04

Trusted Public Steward / The backbone of Waterfront Toronto's work is its long-standing commitment to genuine public engagement. As a trusted public steward, we've established the most consultative approach in Canada and we continue to find new ways to bring the public into shaping the future of the city. For example, this year we restructured our approach to public participation around the IAP2 international standard, a recognized best practice for involving the public in an honest, meaningful and effective way.

05

Capital Connector / We are a nimble connector that leverages public resources to attract private investment. Through powerful collaboration across all three orders of government, we use public funds to initiate carefully chosen waterfront revitalization projects, and then convene a broad range of vital partners—regulators, private sector partners, technical experts, non-profit organizations and communities—to ensure those projects reach their full potential economically, socially and ecologically.



Waterfront Toronto has....established both tri-government funding [and] tri-government buy-in. Despite challenges...interviews with funding partners indicate that Waterfront Toronto has developed credibility in delivering waterfront renewal and provided a vehicle for intergovernmental cooperation that would otherwise be absent.

—

Ernst & Young LLP, Independent Performance Assessment of Waterfront Toronto, 2015

Surveying by the Keating Channel. This work is part of the Port Lands flood protection initiative, which began in December 2017 and is expected to be complete by the final year of this plan: 2023/24. See pages 8-9 and 46-47 for more on this transformative project.

How We Create Value

Since 2001, nearly 50 major developments have been launched in waterfront districts. The combined construction value of these developments is estimated at nearly $21.5 billion, including several projects that have already been completed, are under construction or are expected to enter the market in the coming years within and near the central and eastern waterfront areas.

Waterfront Toronto's role in the extraordinary growth of development in the previously underutilized lands along the lake unfolds in five key phases:

01

Governments give Waterfront Toronto oversight of the use of public lands.

02

As Master Planner, Waterfront Toronto creates holistic master plans for waterfront precincts, laying the foundations for complete communities where people have everything they need to live, work and play.

03

Given the contaminated, poorly serviced and isolated nature of waterfront lands, Waterfront Toronto shares risk with developers to attract private investment to revitalize the waterfront. In addition to taking the lead on critical infrastructure, we support a range of municipal approvals such as zoning, affordable housing commitments and management of any environmental issues. These enabling activities allow developers to assume the marketing, financing and construction risks.

04

Once the lands have been prepared for development, Waterfront Toronto brings them to market through a competitive process.

05

All Waterfront Toronto development projects have attracted considerable interest from developers and private investors, with returns on public investments typically amounting to multiples of the original outlay.



Fiscal Responsibility and Accountability

Waterfront Toronto is committed not only to the careful and transparent management of public funds, but to continually refining our processes and systems to ensure that we're able to generate the greatest possible public benefit with the resources entrusted to us. Over the next five years, Waterfront Toronto will continue to demonstrate the openness, accountability, fiscal prudence and pursuit of design excellence that have defined our approach from the beginning. This approach has earned us a reputation as leading city-builders with an unwavering commitment to the public good.

Procurement Approach and Record

Waterfront Toronto's procurement policy is designed to be fair, open and transparent. We aim to achieve maximum value for our stakeholders, invite competitive bids and proposals, and ensure accountability for purchasing decisions through well-defined authorization and oversight protocols. Since our founding, we have entered into 2,110 contracts with 782 suppliers, most of whom are in Canada. Information about our procurement history is available on our website.

Culture of Accountability

Waterfront Toronto aims to foster a culture where everyone embraces and stands up for the public-interest mission of our organization. To that end, we have a **Wrongdoing Policy,** which empowers employees and other stakeholders to voice any concerns in areas ranging from unethical business conduct to health and safety violations. In 2016 we appointed an independent, third-party **Accountability Officer** to receive and investigate any such reports. We also have an official **Code of Conduct** that offers guidance to our team in areas such as conflict of interest, ethical decision-making and the handling of confidential information.

Project Planning and Management

Over the last 15 years, Waterfront Toronto has executed about 50 projects, managing a total investment of $1.3 billion. This entire project portfolio, with the exception of one project, has been delivered without material deviations in either schedule or cost. In 2017, as we embarked on larger-scale projects like the Port Lands flood protection initiative work, we further formalized our approach to project management and oversight with the creation of the **Capital Program Management Office (CPMO),** which both streamlined and strengthened our policies and controls. The CPMO develops project-oversight dashboard reports that update senior management, board members and the three orders of government on project status and key risk areas, as well as any budget, cost, scope and schedule variations. In the event that a project in process begins to present an increased risk of cost overruns, Waterfront Toronto has clear and effective mechanisms for adjusting its approach to avoid going over budget.

Delegations of Authority
Waterfront Toronto has carefully designed processes to **direct, control and monitor financial actions** taken by our team members. The Board delegates and delimits varying degrees of financial authority to senior management, management and employees in a framework designed to minimize risks and maximize efficiencies in the conduct of our business.

Openness and Transparency
Each December Waterfront Toronto's Board of Directors adopts a publicly released **Corporate Plan** for the upcoming year; our progress is monitored against this plan and reported at least quarterly. At the end of each year we release audited financial statements and an **Annual Report,** which formally reports on our progress against the previous year's plan. In cases where our results differed from our plan, we make this information clear and easy to access.

Audit Environment
Waterfront Toronto operates in a rigorous audit environment:

- **External audits.** In keeping with legislation, Waterfront Toronto's year-end financial statements are audited annually; we've had 16 such audits since our inception.
- **Internal audits.** In addition to required audits, soon after its creation Waterfront Toronto adopted the best practice of voluntarily undergoing regular, outsourced internal audits. Since 2004, we've undergone 19 audits focusing on areas of our operations ranging from procurement to project management to cybersecurity.
- **Government audits.** As part of their oversight role, the three governments perform regular audits and performance reviews of Waterfront Toronto. To date, governments have audited us on 16 occasions.

In all, over the last 15 years, Waterfront Toronto has been the subject of over 50 audits; we've used their findings to steadily strengthen and enhance our fiscal responsibility and accountability practices.

Governance and Oversight
As a tri-government organization, Waterfront Toronto is fully accountable to the governments of Canada, Ontario and the City of Toronto. A number of oversight bodies shape the work of Waterfront Toronto.

- **Our Board of Directors,** which includes members appointed by all three orders of government (see p.37), guides our strategy, authorizes our investments and appoints our CEO.
- **The Intergovernmental Steering Committee,** composed of senior officials from the three orders of government, is a forum where

Waterfront Toronto and senior government stakeholders can strategize and exchange information on waterfront revitalization.

- **Government waterfront secretariats,** composed of dedicated staff at each of the three governments, provide operational oversight and support in the delivery of our mandate.

Expert Insights

Waterfront Toronto is proactive in ensuring that our work is guided by field-leading experts and aligned with best practices.

The Capital Peer Review Panel engages some of the industry's top experts in specific industry areas—such as infrastructure, project execution, and audit—to offer advice on project and program risks in developing, procuring, and implementing large projects and programs.

The Digital Strategy Advisory Panel is an arm's-length body tasked with providing Waterfront Toronto with objective, expert advice on the responsible use of data and technology across all waterfront projects, including Quayside. It provides insight on ethics, accountability, transparency, protection of personal privacy, data governance and cyber security.

The Design Review Panel includes some of Canada's leading experts in architecture, landscape design, engineering, and planning, and draws on their insights to support design excellence in waterfront precincts.

The Independent Capital Project Monitor (new in 2018) supports the Finance, Audit and Risk Management Committee of the Board in its project risk oversight role on the Port Lands flood protection initiative.

Board & Committees

Waterfront Toronto's Board of Directors is made up of 12 members, including a chair, jointly appointed by the three orders of government. Our directors are highly engaged in the corporation's activities and ensure that our mandate is delivered in an accountable and transparent manner. As of December 6, 2018 our Board has two vacancies.

Helen Burstyn, CM
Chair of the Board of Directors, Managing Director, Crescent Investment Partners

Mohamed Dhanani
Special Advisor to the President, Ryerson University

Stephen Diamond
President and CEO, DiamondCorp

Meric Gertler CM FRSC MCIP FAcSS FBA
President, University of Toronto

Susie Henderson
North America Leader, Infrastructure Investment & Economics GHD Advisory

Mazyar Mortazavi
President & CEO, TAS

Michael Nobrega
Former President and CEO, OMERS Administration Corporation

Sevaun Palvetzian
CEO, CivicAction

Janet Rieksts-Alderman
Managing Director, BRG's Global Capital Projects

Jeanhy Shim
President and Founder, Housing Lab Toronto

	Finance, audit & risk management committee	Stakeholder relations committee	Chairs committee	Investment, real estate, & Quayside committee
Mandate	Financial reporting, audit, enterprise risk management, and project risk management	Public engagement, communications, partnerships	Human resources, government relations, governance	Quayside, development projects, and real estate transactions
Chair	Janet Rieksts-Alderman	Sevaun Palvetzian	Helen Burstyn	Susie Henderson Mazyar Mortazavi
Other members	Susie Henderson Jeanhy Shim	Mohamed Dhanani Meric Gertler Jeanhy Shim	Susie Henderson Mazyar Mortazavi Sevaun Palvetzian Janet Rieksts-Alderman	Stephen Diamond Meric Gertler Michael Nobrega

SECTION 4

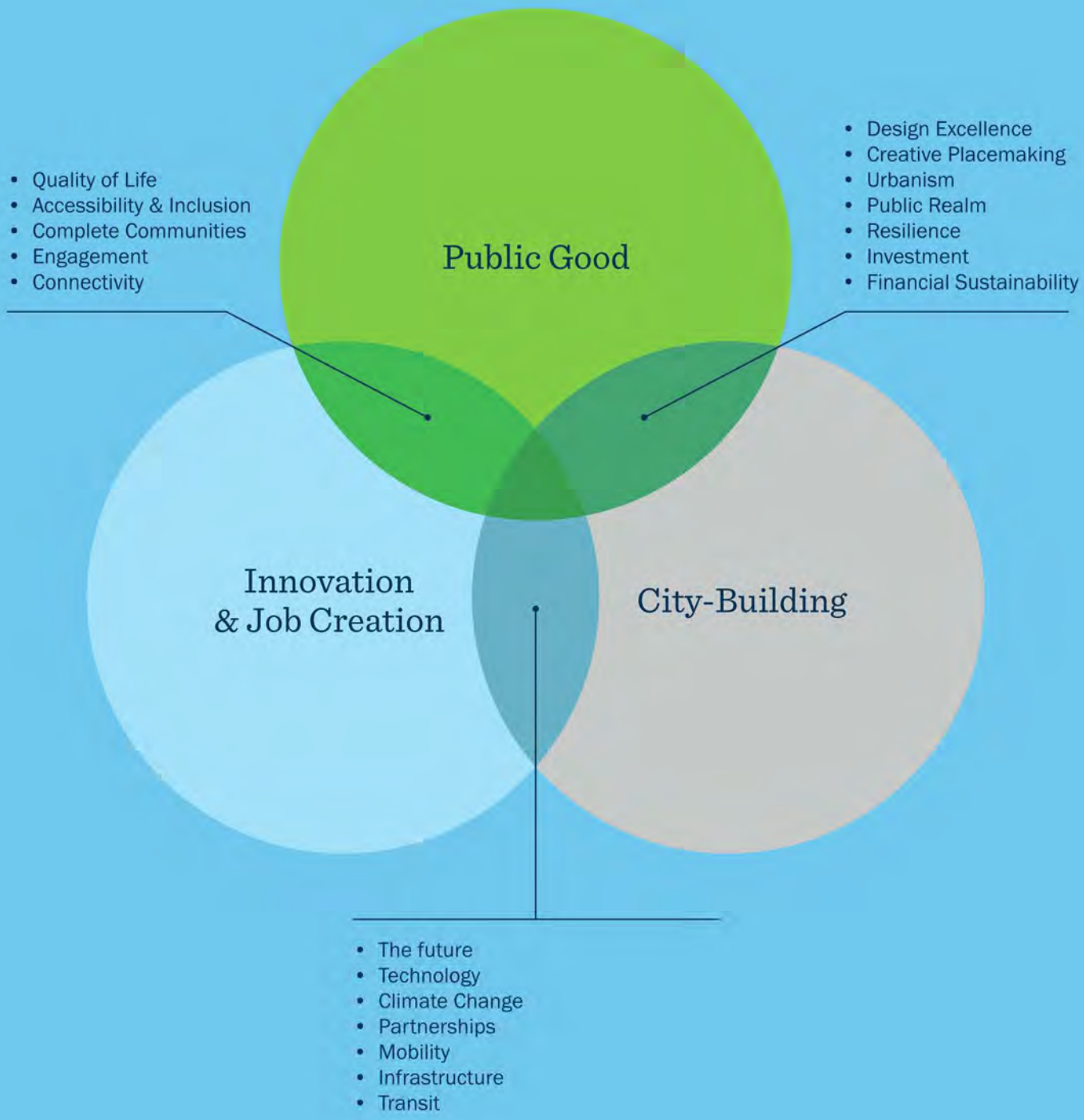
OUR PLAN FOR 2019–2023:
BUILDING A CONNECTED WATERFRONT THAT BELONGS TO EVERYONE

Since Waterfront Toronto was created, we've delivered more than four dozen capital projects on the lands along the lake—transforming almost 100 hectares of underutilized space into active urban places. Although our projects are diverse, they're all powered by our expertise in city-building, our focus on innovation and job creation and our unwavering commitment to the public good.

This section summarizes the projects we plan to deliver over the next five years. Some are already underway. Others will break ground during the life of this plan. And still others are areas of new potential—ideas and possibilities we intend to explore with our stakeholders and the public as we continue to work together for a vibrant, prosperous, and connected waterfront.

Our Core Committments

Enhancing the Social, Economic and Cultural value of the waterfront







Waterfront Toronto has built a reputation for creating public spaces that quickly become local favourites. The key ingredient of projects like Sugar Beach (above) and Corktown Common (right) is thoughtful design informed by meaningful public consultation.

Our Strategic Priorities

Over the next five years, Waterfront Toronto will advance four strategic priorities that build upon our mandate and explore the potential of the waterfront to not only build prosperity and enhance life in Toronto, but to contribute to the urgent global conversation about how to create better cities. Three of these priority areas are long-standing and foundational to our organization and mandate:

01

City-Building / Already a thriving and diverse global centre, Toronto remains one of the most exciting city-building opportunities on earth. Over the next five years we are delivering initiatives that address core issues such as affordability, mobility and connectivity, sustainability and the resilience of the built environment.

02

Public Good / At the heart of everything Waterfront Toronto does is an unwavering commitment to public good, which is reflected in our vision—one connected waterfront that belongs to everyone—and in our strong focus on public engagement. We work hard to be transparent and accountable, while actively seeking public input to ensure that we're improving quality of life and the well-being of people and communities across every project we deliver.

03

Innovation and Job Creation / We are part of a worldwide community of practice that's using cutting-edge building methods, groundbreaking urban design, talented people and emerging technology to provide critical infrastructure and to support more sustainable ways of living. Through smart planning and effective partnerships, we're creating more jobs and unlocking the enormous economic value of the waterfront.

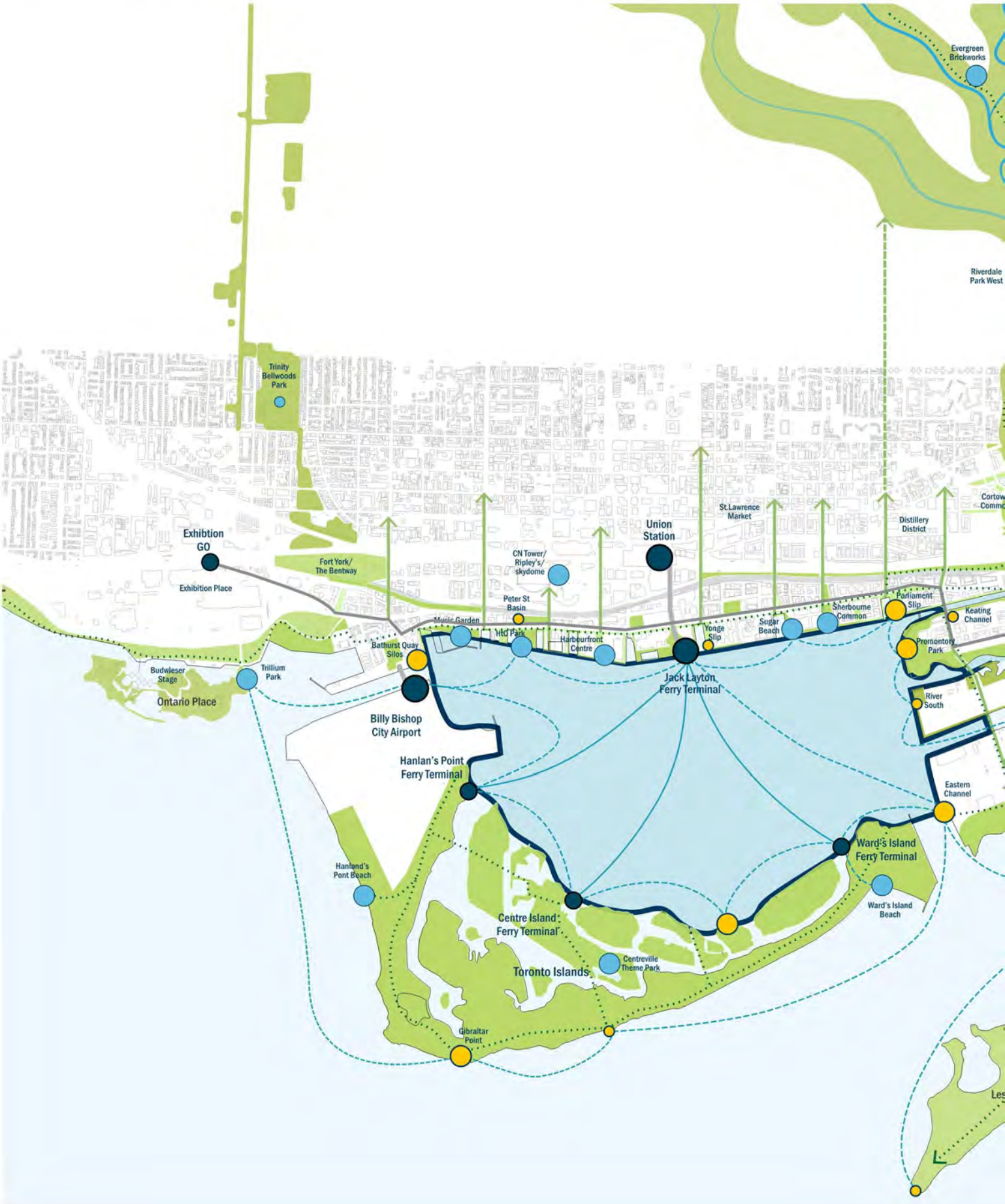
During our 2019–2024 planning horizon, we will pursue a fourth, enabling priority in order to build our capacity to pursue the three priorities just described.

04 Enabler

Financial sustainability / Over this next phase, Waterfront Toronto will pursue new partnerships and philanthropic support. We will foster new collaborations to advance our city-building mission, to engage new partners in waterfront revitalization and to benefit the public—all while diminishing our reliance on government investments.



The revitalized Queens Quay is the first route in Toronto whose design aligns with the City's Complete Streets Guidelines. Complete streets are carefully planned to be safe for everyone: people of all ages and abilities, and people who walk, bicycle, take transit, or drive.


Evergreen Brickworks
Riverdale Park West
Trinity Bellwoods Park
Exhibtion GO
Exhibition Place
Fort York/ The Bentway
CN Tower/ Ripley's/ skydome
Union Station
St Lawrence Market
Distillery District
Peter St Basin
Music Garden
Harbourfront Centre
Yonge Slip
Sugar Beach
Sherbourne Common
Parliament Slip
Keating Channel
Promontory Park
Bathurst Quay
Silos
Budweiser Stage
Trillium Park
Ontario Place
Billy Bishop City Airport
Jack Layton Ferry Terminal
River South
Hanlan's Point Ferry Terminal
Eastern Channel
Ward's Island Ferry Terminal
Hanlan's Pont Beach
Ward's Island Beach
Centre Island Ferry Terminal
Centreville Theme Park
Toronto Islands
Gibraltar Point

More Connections to More Destinations

Our vision is one connected waterfront that belongs to everyone. Successful waterfronts around the world tend to share at least one key ingredient: waterfront promenades that connect people to great places and activities. Toronto's waterfront already has some elements of a great promenade: boardwalks, bike paths, parks and ferry service to the Toronto Islands. But connectivity around and across the harbour remains limited.

The goal of the next five years is to leverage the framework of connections around the harbour as a foundation for longer-term evolution. All of the projects outlined in this five-year strategic plan are oriented toward filling in gaps in the ring of destinations and connections that surround the harbour—whether by creating new parks, equipping emerging neighbourhoods with high-quality infrastructure, expanding the potential for travel on land or across the water, or creating inviting new destinations. These new projects will move Toronto's waterfront to the next level of revitalization, unlocking its potential and affirming Toronto's position as a leader in city-building, urban design, sustainability, resilience and quality of life.



DESTINATIONS

- Existing
- Emerging/Future

CONNECTIONS

- Inner Harbour Loop (Proposed Enhanced Pedestrian Access)
- Existing Transit Hub
- Existing Ferry System
- Potential Waterborne Tranportation Routes
- Waterfront Trail System

The Port Lands / Flood Protection for Prosperity, Resilience and Sustainability

The Port Lands flood protection initiative is our single largest target for investment over the next five years, and an urgent contribution to the prosperity and well-being of Toronto. First, this work will protect a large number of existing assets from flooding: affected areas include parts of Leslieville and South Riverdale. Second, it will create prosperity by unlocking the development potential of 290 hectares of prime land; this area has been previously unavailable for development due to its extreme vulnerability to flooding. And third, it will improve the natural environment around the Don River and create new opportunities for residents and visitors to connect with nature, wildlife and the lake.

Our work in the Port Lands involves extensive soil remediation and earthmoving work around the mouth of the Don River, which will dramatically enhance the area's resilience to extreme weather. Projections indicate that a $1.25 billion public investment in flood protection—made jointly by the governments of Toronto, Ontario and Canada—will add $5.1 billion in economic output to the Canadian economy, create 51,900 full-time years of employment and generate $1.9 billion in government revenue. The Insurance Board of Canada has stated that these investments in flood protection "will make this community safer for residents and stronger for economic growth."

PAST: In June 2017, the municipal, provincial and federal governments affirmed a shared $1.25-billion public investment in the Port Lands flood protection project. Since that time, Waterfront Toronto has undertaken planning and design work, tested methodologies for soil remediation, and analyzed engineering techniques for the ambitious earthmoving initiative.

PRESENT: Work on Cherry Street Lakefilling began in 2017, including lakefilling, marine landscaping and dockwall reconstruction. In early 2018 we undertook survey work to inform final designs and the construction approach, as well as demolition and site preparation. Excavation and soil remediation will begin in the winter of 2018–19. We will also work to finalize designs for the streets, bridges, parks and other infrastructure that will serve the future Villiers Island community and connect it to the mainland.

FUTURE: Over the next five years, the area around the mouth of the Don River will be transformed. The foundations for development of new places to live and work on Villiers Island will take shape—including new transit connections and cycling facilities. New parks and natural habitats will connect the Port Lands to a 195-hectare network of greenspaces through the GTA's ravine system. The project will be complete in the final year of this plan: 2023/2024.



[F]lood protection radically alters the river's environmental health, as well as the linear industrial geography of the Port Lands and therefore the destiny of the city. It is a project for the ages that will deservedly draw the attention of the world's great cities.

—

John Lorinc, Spacing Magazine, June 29, 2017



Waterfront Toronto is truly walking the talk on how to build a healthy, sustainable neighbourhood. Their significant infrastructure investments and world class parks and public spaces are making East Bayfront Toronto's next great district. We're thrilled to have been able to work with Waterfront Toronto on our 'City of the Arts' community and we're looking forward to moving our Head Office into this vibrant new neighbourhood."

—

Mitchell Cohen, President and CEO Daniels Corporation

Complete Communities / Planning and Partnering to Build Strong Foundations for New Neighbourhoods

Through careful planning and effective partnerships, Waterfront Toronto optimizes the use of large parcels of land available for development along the waterfront. We work as master planners, developing detailed precinct plans that ensure new neighbourhoods include the supports and amenities people and businesses need to thrive over time. In addition to housing and commercial space, new waterfront neighbourhoods benefit from high-quality infrastructure, services like child care and elder support, and transportation links to the rest of the city. After developing comprehensive plans for smart development, we partner with developers, businesses, community agencies and governments to bring the plans to life.

This plan anticipates $186 million in investments toward the planning and development of complete communities along the lake. Notable projects that are underway today or expected to commence over the next five years include the development of a complete-community plan for the neighbourhood that will eventually exist on Villiers Island; extending the Queens Quay revitalization work eastward to Parliament Street; completing infrastructure such as roads, stormwater systems, and dock reinforcements for the new Bayside and Dockside neighbourhoods; and further extending (through Bayside) the Water's Edge Promenade —a walkway that's substantially increasing public access to the water while improving mobility along the shore.

The splashpad at Corktown Common. The park is an active, year-round gathering place in the West Don Lands neighbourhood.

PAST: **Waterfront Toronto has laid the foundations for several thriving neighbourhoods—like East Bayfront (22.3 hectares) and the West Don Lands (32 hectares; see pages 6-7). We've also laid important groundwork on waterfront transit: completing environmental assessments for transit to East Bayfront, the West Don Lands and the Port Lands, and collaborating on transit planning with the City of Toronto, the TTC and other agencies.**

PRESENT: **Today we're working with development partners to obtain municipal approvals and building permits for several new residential buildings, including a $200 million, 296,000 square foot mixed-use development with Anishnawbe Health Toronto that includes a community health centre, a hotel and purpose-built market rental units. Meanwhile, an earlier collaboration is coming to fruition as Monde, a $320 million, 476,000 square foot residential building designed by Moshe Safdie, prepares for occupancy in early 2019.**

FUTURE: **The completion of key infrastructure including sewers, pipes, and a new Sanitary Pumping Station are important parts of our work in the near term. More broadly, we'll continue working with our partners to realize holistic visions for waterfront neighbourhoods. For instance, the Waterfront Innovation Centre, part of a growing technology corridor by the lake, began construction in 2018; we're beginning to work with our development partner Menkes to manage leasing arrangements for this innovative facility.**

Public Places / Inviting Parks and Destinations That Connect People and Neighbourhoods

Waterfront Toronto creates great parks and public spaces that respond to local needs and strengthen the broader urban fabric by connecting communities with their neighbours, including across potential barriers like underpasses and rail lines. Guided by meaningful public consultation and a strong commitment to design excellence, our parks have not only earned numerous awards but quickly become beloved local gathering places. The strength of our record on public spaces has also attracted new partners and supporters. For example, as community groups, philanthropists and the City of Toronto began to conceive plans for The Bentway, they decided to engage Waterfront Toronto for help realizing their vision for this innovative linear park based on the success of public spaces we'd created in other waterfront districts.

Our current five-year strategy allocates a total of $56 million for work on public places. This funding will go toward completing work on two new waterfront parks—York and Rees Street Parks, which will add a combined 1.74 hectares of green space near an increasingly populated stretch of Queens Quay—and toward the substantial completion of the construction of The Bentway's pedestrian and cycling bridge. This funding envelope will also support the completion of enhancements to the Jack Layton Ferry Terminal; we're creating a more appealing and functional entrance plaza that's better able to accommodate growing traffic at the facility. This phase of work is fully funded and we're on track to complete it over the next year. We've also developed a vision for a more extensive modernization of the ferry terminal, a separate phase of work that's currently unfunded (see "New Potential" on page 53).

PAST: **To date we've created or improved 25 hectares of parks in waterfront districts. Our projects have included Sherbourne Common, Corktown Common, The Bentway, Sugar Beach, extensive improvements to the Martin Goodman trail, among many others.**

PRESENT: **This year we held successful design competitions for the York and Rees Street Parks, selected successful designs, and started work on creating these badly needed green spaces. We are also poised to complete planned enhancements to Jack Layton Ferry Terminal.**

FUTURE: **Over the next five years, we'll continue to roll out our internationally recognized public art program and respond to partnership requests on new parks and promenades. We also hope to engage partners and supporters to realize new public places by the lake (see New Potential sections on pages 52–55) that will further enhance mobility and public enjoyment along the waterfront.**

RIGHT: *Underpass Park, a Waterfront Toronto project, was featured in a 2017 exhibition at New York's Cooper Hewitt Smithsonian Design Museum that focused on inclusive city-building. The curators chose this as an example of collaborative design that responds to community needs.*



BELOW: *Waterfront Toronto's public realm work is strengthening connections around the harbour in many ways—with increased pedestrian access, new parks that make the landscape more inviting and improved marine infrastructure to support waterborne transportation.*




New Potential

Public Places / New Potential

NEW POTENTIAL / An opportunity to boost mobility and enhance greenspace

Jack Layton Ferry Terminal and Harbour Square Park. Robust ferry systems define cities like Stockholm, Sydney and San Francisco. They link visitors to destinations, workers to jobs and residents to the region. In Toronto, the Jack Layton Ferry Terminal serves an important but limited function: it is constrained by the size of the ferries and the terminal structure. Built in 1972, the current terminal is increasingly stressed by the growing demand for trips to the islands—and expanding service cannot be easily supported. In partnership with the City of Toronto, Waterfront Toronto launched an international design competition to establish a compelling vision for an expanded Jack Layton Ferry Terminal and the park surrounding it. In collaboration with City of Toronto Parks, Forestry and Recreation division, Waterfront Toronto plans to study potential funding and financing models that could realize this vision while limiting the demands on municipal funding.

NEW POTENTIAL / A continuous walkway that connects people and places

Waterfront Walk. Our work to date has already dramatically expanded the number of places where people can reach the water's edge: on promenades, on playful structures like the WaveDecks at Queens Quay, or on the nearly six kilometres we've added to the Martin Goodman Trail. One of our most exciting opportunities over the next five years is to close the gaps in this growing series of lakeside pedestrian routes: to lead the design and construction of a continuous Waterfront Walk, running from the Portland Slip in the West to the Parliament Slip in the East. This cohesive promenade along the water's edge would make the shore even more active and inviting, and would help the waterfront as a destination continue on its evolution toward becoming vastly more than the sum of its parts. We've already conducted preliminary research on exceptional waterfront promenades in cities around the world. When we invited the public to identify what the top priorities for Toronto's future waterfront should be, a continuous promenade was the top answer, with over 44% of respondents prioritizing a better connected waterfront. Over the course of this plan we will pursue discussions with relevant public agencies including City of Toronto Parks, Forestry and Recreation and other potential partners about how to work together to realize this vision.

A continuous Waterfront Walk would offer pedestrians an unbroken route along the downtown lakeshore, dotted with destinations to pause and enjoy—like this candy-striped granite rock at Canada's Sugar Beach, near the foot of Jarvis Street.

Public Places / New Potential (continued)

NEW POTENTIAL / A destination playground for fun and healthy development

Destination playgrounds, immersive play environments for children that emphasize engagement with local ecosystems, are increasingly popular in urban regeneration movements. Their attraction is explained partly by a growing body of evidence affirming that nature play can have a powerful positive effect on children's health and development. Notable examples of the destination playground form include a facility in Christchurch, New Zealand, a cornerstone of the city's recovery plan after the 2011 earthquake, and Maggie Daley Park in Chicago. Waterfront Toronto envisions a 3.6-acre destination play area with distinct zones tailored to children at different developmental stages —and we see clear potential to begin working toward this vision over the life of this strategic plan. The City of Toronto Parks, Forestry and Recreation division is keenly aware of the value of—and the public's interest in—the destination playground model; we're collaborating to explore bringing a unique version of the form to Toronto. Waterfront Toronto and the City of Toronto will work together to seek alternative funding to create a new favourite place for children by the lake.

NEW POTENTIAL / A distinctive structure to anchor and animate the surrounding public realm

Signature structure. Exceptional waterfronts often feature unique structures that become icons of their cities. The best of these structures—the Sydney Opera House is a prime example—come to define their waterfronts, anchoring local economic and cultural activities while communicating a unique identity to the world. There are several waterfront sites that have the visibility and scale suitable for a signature building or structure that would provide a magnetic gathering place, activate the surrounding public realm and catalyze new economic clusters. Over the next five years, Waterfront Toronto plans to assess the potential for a signature structure on the waterfront: consulting the public and potential partners to determine the appetite for such a project, what form it might take and where financial capacity might exist to bring it to life. One possibility for a landmark structure could be an innovative sustainable building that houses a centre of excellence in a distinct field or discipline— for instance, in the growing ecosystem of science, biomedical, environmental, human and social sciences. This site could be an architecturally significant building that also showcases Canadian leadership in an important area. Other possibilities—such as bridges or unique connective structures—could perform a different role but make important contributions to the dynamism and connectedness of the waterfront.



A rendering of one possible approach to the Destination Playground project at Promontory Park (see facing page for project description), a new park planned for the western tip of Villiers Island.



Next-Generation Sustainable Communities / Working at the Intersection of Green Innovation and Inclusive City-Building

Waterfront Toronto has a record of innovation when it comes to new neighbourhoods along the lake. A decade ago we introduced Minimum Green Building Requirements to ensure that new developments on the waterfront would lead the way on sustainable design; these standards have since won international awards and been recognized as a landmark in Toronto's evolution toward a greener built environment. In 2005 we created Toronto's first independent design review panel, gathering leading experts and city-builders to ensure that waterfront revitalization projects would work together to create beautiful, visually coherent neighbourhoods along the lake. Today, at Villiers Island, a new Port Lands district currently in its planning stages, we're striving to create one of the world's first climate-positive neighbourhoods.

Quayside is our most recent exploration of what an innovative community by the lake can be. The neighbourhood has the potential to create a precedent-setting approach to building sustainable, inclusive and prosperous communities. Building on the strength of Toronto's already-thriving tech sector, Waterfront Toronto is also working to create a global hub for a new industry focused on urban innovation—an emerging field that is capable of developing smart, scalable ideas to improve the quality of city life not only in communities across Toronto but in urban centres around the world. Waterfront Toronto's partnership with technology and other firms is just one example of what's possible for Waterfront Toronto as the corporation explores new ways to leverage advanced materials, entrepreneurship, intellectual property and partnerships to draw new revenue models and funding channels.

The Waterfront Innovation Centre, a 350,000 square foot office and retail facility now under construction at 125 Queens Quay East. According to Urban Toronto, this Menkes development, the majority of its space already leased, will "support the emergence of East Bayfront as a prime waterfront live-work-play community within minutes of Union Station."

PAST: **Innovation and sustainability have been central to Waterfront Toronto's city-building approach from our earliest projects. Indeed, our Minimum Green Building Requirements helped inform the standards that are now used across the City of Toronto.**

PRESENT: **We recently launched a new Resilience and Innovation Framework for Sustainability, the next chapter in our continually evolving approach to green city-building. We're also working with Sidewalk Labs to explore the possibilities of a community where advanced technology supports the outcomes —economic, social, and environmental— that matter to Canadians.**

FUTURE: **Waterfront Toronto will receive a Master Innovation and Development Plan (MIDP) from Sidewalk Labs early in 2019, proposing an approach to the revitalization of Quayside. We'll consider this plan against our established evaluation criteria, and in consultation with government stakeholders and the public. We expect to issue a decision on whether to proceed with the plan by the end of 2019. If our Board of Directors approves the plan, we'll begin work on implementation agreements amid continued consultation with all stakeholders. Implementation would be subject to municipal approvals, as well as federal and provincial regulations.**


SECTION 5

Waterfront Toronto has a record of achieving strong results with the public resources entrusted to us and of managing public investments with efficiency and transparency. This section presents an overview of the resources that will fuel our work over the next five years, and lays out the capital investments we expect to make as we deliver the next phase of waterfront revitalization. The pages that follow also outline some of the structures that guide our work—such as our risk management framework and our performance measurement system—and help us to ensure that our organization is positioned for resilience, accountability and success.

Business Model and Funding

This strategic plan covers the period from April 1, 2019 to March 31, 2024. Over the next five years Waterfront Toronto anticipates government funding contributions totalling roughly $1.1 billion and land contributions in kind totalling $86 million, as well as $92 million in revenues from sources such as leases and land sales, for a total of approximately $1.3 billion from fiscal 2019/20 through 2023/24.

Waterfront Toronto will invest this funding in key infrastructure related to its priority initiatives: The Port Lands flood protection initiative ($1.0 billion), Complete Communities ($186 million), Public Places ($56 million), Next-Generation Sustainable Communities (Quayside) ($10 million) as well as Strategic Initiatives and Other, such as office space, technology, and capacity, required to deliver these projects ($24 million). These planned investments total approximately $1.3 billion. Investments across these project areas support Toronto City Council-approved precinct plans and have been articulated in our past business and implementation plans.

We anticipate that these investments of public funds will yield returns that considerably exceed the original outlay. To date, through the business model described on pages 32 and 33, the $1.2 billion in public funds invested in our work have stimulated over $10 billion in new private-sector investment. Details on the economic benefits of our work are detailed in the Performance Measurement section on page 67. Key project milestones associated with our investments over the next five years, as well as financial plan details, are outlined in Appendix 1, which focuses on the next fiscal year (2019/20), and Appendix 2, which focuses on the full five-year planning horizon (2019/20-2023/24).

Our access to a $40 million credit facility is a key financial foundation of this strategic plan, which optimizes the use of cash throughout multiple project lifecycles. This is an important capability because the timing of the funding and/or revenues we receive and the infrastructure investments we need to make do not always coincide. Waterfront Toronto will continue to use our borrowing access responsibly, with full accountability to governments.

5-Year Outlook

Waterfront Toronto has already received funding commitments from governments for the work described above: the Port Lands flood protection initiative, and the continuation of approved projects related to Complete Communities and Public Places (see pages 48 to 51). By the conclusion of our five-year planning period in 2023/24, we expect these projects to be 98% complete.

In addition to our core, funded projects, we've identified four new initiatives that are consistent with our mandate and for which we see considerable potential for new partnerships and private philanthropic support. Three of these projects (Destination Play, Waterfront Walk, and Jack Layton Ferry Terminal and Harbour Square Park) would fall under our "public places" project portfolio; the fourth (Signature Structure) would be a potential anchor for a complete community and economic cluster. The realization of these projects would require $400 million over ten years. While the four "New Potential" projects are currently unfunded, our plan is to source initial new funding to complete initial business cases and feasibility studies prior to proceeding further.

Waterfront Toronto plans to develop new capacity in fundraising and partnerships beginning in fiscal 2019/20. A vital first step in this work was realized in 2017 when we obtained Qualified Donee status from the Canada Revenue Agency under the Income Tax Act. This new status will enable us to work alongside our partners at the City of Toronto to connect with the growing number of institutions and private donors who are enthusiastic about directing philanthropic investments toward civic placemaking projects and the public realm. We'll undertake this new partnership and philanthropy work based on shared values and principles, and with the aim of developing an appropriate funding/fundraising model that diminishes our reliance on government funding and realizes new opportunities that advance our mission.

The five-year outlook summarized in this document may change; any revisions to the funding and investment mix expressed in this strategic plan will be reflected in future documents, including the one-year plans that we'll continue to publish annually. The next such corporate plan is forthcoming in December 2019. The areas Waterfront Toronto understands to be most subject to change include:

- *Implementation of Quayside MIDP.* This Rolling Five-Year Strategic Plan is currently limited to the evaluation of a Master Innovation and Development Plan (MIDP). The implementation of the MIDP and the approval by Toronto City Council of a Business and Implementation Plan are not reflected in this plan as they are not yet defined.
- *Waterfront transit.* Government plans are not finalized, and therefore our potential planning and coordination role in the delivery of transit by the lake is uncertain.
- *Villiers Island implementation.* Similar to Quayside, a Business and Implementation Plan will be required for the new neighbourhood on this city-owned parcel of land and will also be subject to approval by Toronto City Council.

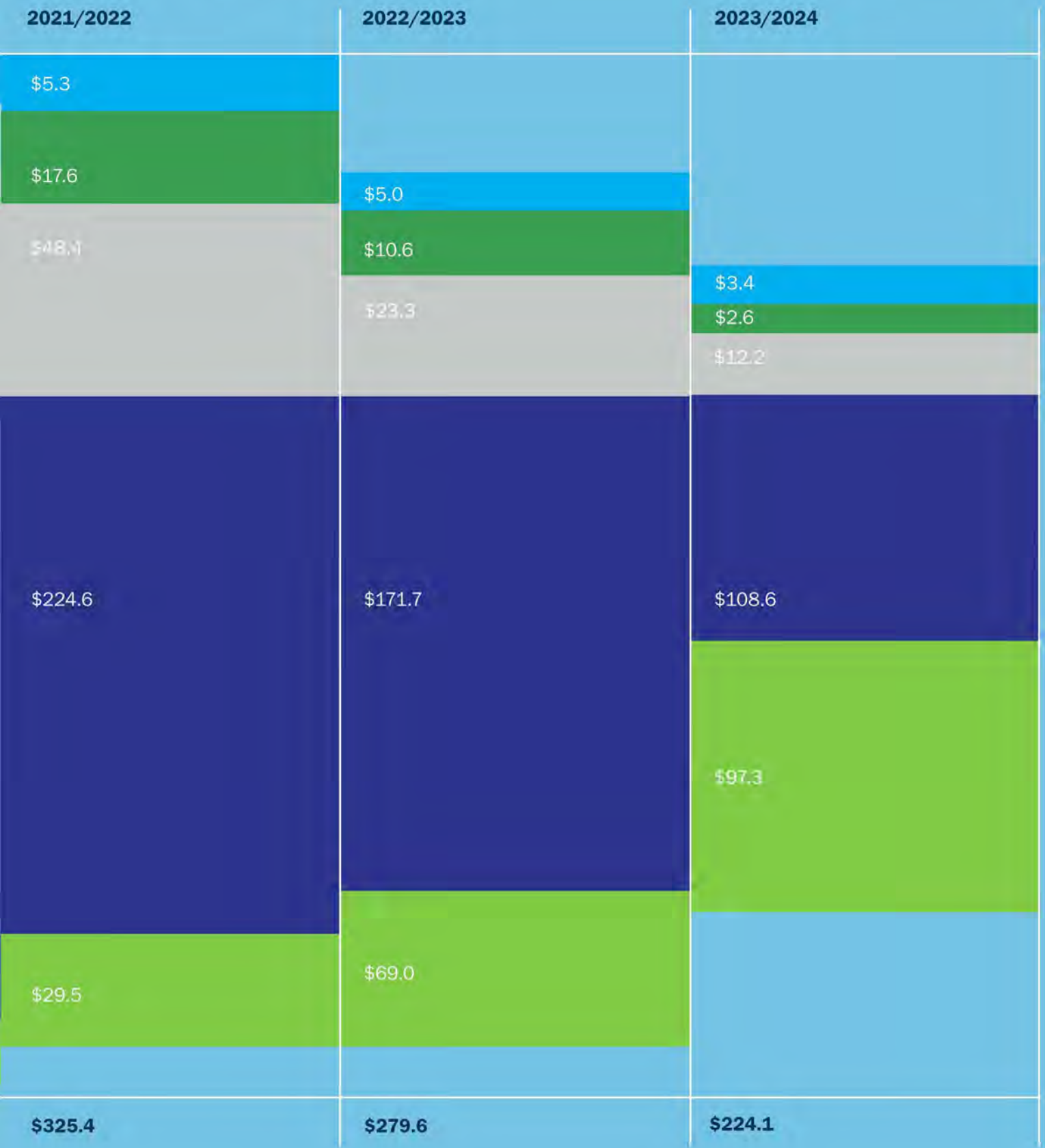
Five-Year Investment Plan

Complete figures underlying this visualization of our planned investments over th

	2019/2020	2020/2021
Strategic Initiatives/Other	$5.6	$5.1
Public Places: York & Rees Street parks, public art, ferry terminal upgrades, The Bentway	$13.2	$12.0
Complete Communities: master planning, civic infrastructure, and environmental work	$50.8	$51.3
Next Generation Sustainable Communities: master innovation and development plan for Quayside	$10.4	
Port Lands: flood protection and related infrastructure	$245.1	$264.7
New Potential: currently unfunded; see pages 52 to 55		$9.8
Total Investment Plan	**$325.1**	**$342.9**

e next five years are in Appendix 2.

Figures are in millions



Corporate Operating Costs

Waterfront Toronto acts as a project delivery agent for the three orders of government. The responsibilities and obligations of each government and of Waterfront Toronto are defined under contribution agreements or delivery agreements that cover specific projects and initiatives. Under these agreements Waterfront Toronto is typically contracted to plan and build municipal infrastructure assets; once these assets are complete, they're transferred to the City of Toronto to own and maintain.

In carrying out this role, Waterfront Toronto incurs corporate operating costs related to our staff team and contractors, office space, technology (basic office tools as well as specialized project management and financing software), communications (which includes public engagement activities such as town halls, as well as outputs like our website and annual reports), and transparency and accountability (for instance, internal and external audits and fees for experts on our oversight bodies such as the Capital Independent Monitor for the Port Lands and the Design Review Panel).

These expenditures, which directly support the projects Waterfront Toronto delivers, represent about six percent of the total direct capital expenditure under our management. In the past, the costs associated with Waterfront Toronto's project delivery work have not been fully covered through our funding agreements with governments and the shortfalls have been covered from revenue streams, such as land sales and property rental income. One objective of this plan is to move toward funding arrangements in which Waterfront Toronto can recover the full project management costs required to achieve the results governments task us with delivering.

Corporate Operating Costs	**2019/20**	**2020/21**	**2021/22**	**2022/23**	**2023/24**
Operating Expenditure (OpEx)	$ 18.70	$ 18.70	$ 18.50	$ 17.20	$ 14.80
Capital Expenditure (CapEx)	$ 306.40	$ 324.20	$ 306.90	$ 262.40	$ 209.30
Total Expenditures	**$ 325.10**	**$ 342.90**	**$ 325.40**	**$ 279.60**	**$ 224.10**
% OpEx of CapEx	**6%**	**6%**	**6%**	**7%**	**7%**

Figures are in millions

Waterfront Toronto's funding and spending mix 2019/20–2023/24



Figures are in millions

The chart above summarizes Waterfront Toronto's funding and expenditure mix over the next five years. The visualization illustrates:

- that the vast majority of our planned expenditures are direct capital investments (94%)
- our strategic objective of diversifying our funding sources beyond governments
- planned expenditures that are currently unfunded are mainly all "New Potential" projects
- the planned creation and maintenance of a contingency reserve of at least $25 million. We intend to use funds from the sale of Waterfront Toronto-owned land to create this fund, and hold the resources in reserve as a program level contingency and to cover any costs (e.g. those associated with ending lease agreements and other contracts) that may arise in the eventual completion and/or cessation of our mandate.

Resilience, Risk Management, and Accountability

Waterfront Toronto navigates a complex business environment in order to implement its revitalization work, which involves a range of major infrastructure projects, as well as diverse partners and stakeholders. This business environment presents a number of significant risks associated with individual capital projects, as well as those that affect the entire enterprise.

We manage and mitigate these risks by applying an Enterprise Risk Management (ERM) framework developed by the senior management team and internal committees, and approved and overseen by our Board. The overall objective of the ERM framework is to ensure that Waterfront Toronto can identify and mitigate key risks associated with the Corporation's ability to achieve its strategic objectives.

The ERM framework applies the widely used "three lines of defence" approach to risk management and control, assigning clear roles and responsibilities to:

1. risk owners (in particular, the project and financial managers) who execute projects and operational functions on a day-to-day basis;

2. entities that oversee risk, including the Corporation's Enterprise Risk Taskforce, Program Management Office, and Technical Advisory and Peer Review Panels; and

3. assurance mechanisms, such as Waterfront Toronto's internal audit function and independent capital monitor role, both designed to ensure that risk management systems and controls are working effectively.

The first two lines are directly accountable to Waterfront Toronto's senior management. The third line is accountable to the Board and the Finance, Audit, and Risk Management Committee, as well as to senior management. This separation of roles not only enhances accountability by clarifying responsibilities, it helps to reveal and address blind spots to ensure that Waterfront Toronto is proactively identifying and managing risks.

Measuring Waterfront Toronto's Performance

Performance measures have been in place at Waterfront Toronto for a number of years to assess our economic, social and environmental achievements in relation to our mission and mandate. We report on our performance regularly through annual reports and our Corporate Social Responsibility reporting, which uses Global Reporting Initiative (GRI) guidelines—global best practice for reporting on a range of economic, environmental and social impacts. Using the Integrated Performance Framework, we communicate our enterprise level operating and project delivery outcomes to our Board, management and government stakeholders as well as the wider public.

The Integrated Performance Framework is composed of concrete measures across a range of dimensions that indicate our success or failure in delivering meaningful results and outcomes for the people of Toronto, Ontario and Canada. We've been publicly reporting our indicators and outcomes for a number of years using a consistent framework.

As we embark on a new five-year strategic plan, Waterfront Toronto is refreshing our Integrated Performance Framework to align it with the initiatives and priorities in this document. We have designed our refreshed framework to be:

- *Complete and Relevant:* indicators cover all seven elements of our legislated mandate; these indicators were selected for their relevance to the policy priorities set by the government stakeholders.
- *Measurable and Reliable:* wherever possible we use performance indicators for which objective, accurate and quantitative data are available. We seek out indicators that are tracked consistently over time to allow the analysis of longitudinal trends.
- *Understandable:* we select and define our performance indicators so they're clear and easily understood by the general public, as well by representatives of our government stakeholders and industry partners. Where possible, we adopt benchmarks that are widely used in development and city building.
- *Mutually Exclusive:* we use performance indicators that independently measure elements of Waterfront Toronto's mandate and operations to avoid double-counting.

Success for Waterfront Toronto is:		Waterfront Toronto will measure success by:	Actual 2001-2017	Annual Target 2019/20	5 Year Target 2019-2023
1. Enhancing economic value • Waterfront Toronto will create new employment opportunities during the development of waterfront lands • Waterfront Toronto developments will lead to new businesses on the waterfront that will provide ongoing employment opportunities • The developments on the waterfront will lead to increased taxes for all three governments and contribute economic value for the Canadian economy	**1.1**	Jobs: Full time years of employment during construction	14,100	2,000	10,800
		Jobs: Full time years of ongoing employment	5,000	N/A — 5 year measure	5,000
	1.2	Taxes: New taxes to City, Provincial and Federal governments	$848 M	$75 M	$373 M
	1.3	Total economic value added to the economy	$1,900 M	$200 M	$1,100 M
	1.4	Labour Income	$1,100 M	$140 M	$724 M
2. Enhancing social and cultural value • Waterfront Toronto will be a world leader in design excellence and waterfront planning that will make Canadians proud of the Toronto waterfront • Waterfront Toronto will develop spaces that are accessible to all income levels	**2.1**	Number affordable housing units developed	496	80	729
	2.2	Number of market housing units developed	1,767	553	3,133
	2.3	Number of design awards	90	5	25
	2.4	Number of new permanent public art installations	9	1	7
	2.5	Percentage of projects with Design Review Panel support at the end of the design review process	100%	100%	100%
3. Creating an accessible and active waterfront for living, working and recreation	**3.1**	Acres of new parks and public spaces	77	2	31
	3.2	Kilometers of new trails and pedestrian connections (PATH; walkways, bridges; enhanced crossings)	17	-	13
	3.3	Number of events on the waterfront	74	>10	>50
4. Implementing a plan in a fiscally responsible manner • Waterfront Toronto will work within the funding provided and will continuously search out new revenue sources to support the development of the waterfront • Waterfront Toronto will use thorough processes to set and manage the project budgets	**4.1**	Percentage of competitive procurements by dollar value	New measure	>95%	>95%
	4.2	Percentage of projects over $10 million completed within 5% of budget (in the last five years)	95%	90%	90%
	4.3	Percentage of projects over $10 million completed within six months of original schedule (in last five years)	New measure	90%	90%
5. Implementing a plan in an environmentally responsible manner • The developments on the waterfront will meet the needs of the present without compromising the ability of future generations to meet their own needs • Waterfront Toronto will develop its plans for the waterfront with a focus on the resilience of the surrounding environment	**5.1**	Number of acres committed to climate positive	82.7	82.7	82.7
	5.2	Intelligent & Connected Extent of broadband coverage (number of people with access)	New measure	N/A — 5 year measure	9,328
	5.3	Biophilic square metres of aquatic habitat created	119,173	120,000	120,000
	5.4	Biophilic meters of waterfront access	5,840	2,700	13,567
	5.5	Human Experience-Drive Average distance to access transit	500m	500m	500m

Success for Waterfront Toronto is:	Waterfront Toronto will measure success by:		Actual 2001-2017	Annual Target 2019/20	5 Year Target 2019-2023
6. Financially self-sustaining designated waterfront area • Waterfront Toronto's enabling works will mean that the residential and commercial developments are financially feasible for private developers, without government support	**6.1**	Increase in residential sales prices per square foot	New Measure	N/A — 5 year measure	2%
	6.2	Total population (residents, students, workers)	6,300	3,200	16,000
7. Promoting and encouraging involvement of the private sector • Waterfront Toronto will assist other Canadian businesses succeed through partnerships	**7.1**	Number of new development and/or strategic partnerships cultivated	30	2	15
	7.2	Private sector dollars invested in waterfront developments	$10 billion	$0.5 billion	$3 billion
	7.3	Value of philanthropic, corporate sponsorship, non-government sourced contributions	$25 million	>$nil	$206 million
8. Encouraging public input • Waterfront Toronto will foster public trust in its current and planned activities • Waterfront Toronto will build public awareness of its past, current and planned activities	**8.1**	Number of digital media hits	New measure	>500	>2,500
	8.2	Number of public and/or stakeholder meetings held	>324	>20	>100
	8.3	Number of media (i.e. radio, tv, print, online) references to Waterfront Toronto and its initiatives	New measure	2,500	>10,000
	8.4	Number of times Waterfront Toronto staff have presented at conferences and industry events	New measure	100	400
	8.5	Number of public meeting attendees self-identifying as residing outside the designated waterfront area	New measure	25%	25%

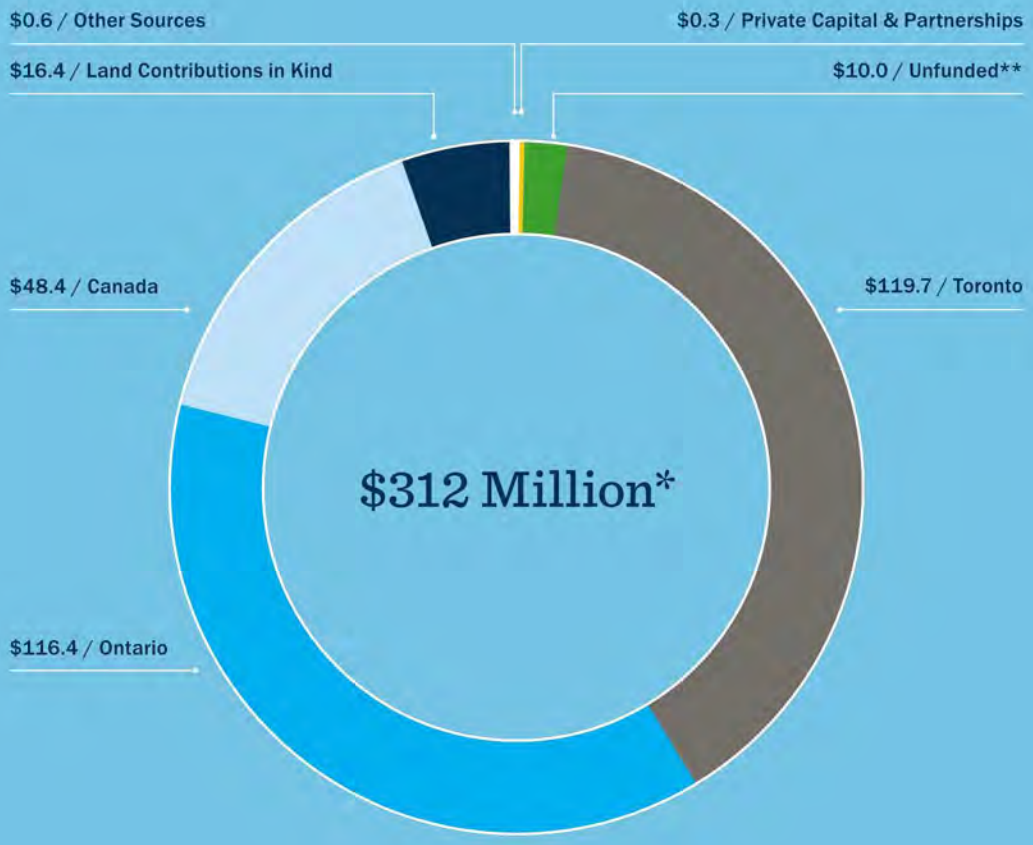
Note: Waterfront Toronto will update the above performance measures related to its legislative mandate annually through its subsequent Corporate Plans and also formally report back on achievements in its Annual Report issued in June each year.

Appendix 1: 2019/20 Key Milestones & Financials

Major Milestones		2019/20 Budget
The Port Lands	• Complete design for three bridges (Cherry Street North, Cherry Street South and Commissioner Street bridge) • Commence deep soil mixing for project site • Commence site preparation and demolition works	$245
Complete Communities	**Bayside** • Complete construction for Aitken Place Park • Select non-profit operator for affordable housing site **Stormwater and sanitary sewer infrastructure** • Complete concrete building shell and install treatment equipment for Stormwater Facility (SWF) • Final commissioning of Sanitary Pumping Station on permanent power • Construct in-water pipe for SWF **Queens Quay East Revitalization** • Negotiate acquisition of land related to road realignment and associated approvals.	$51
Public Places	• York & Rees Street Parks: Complete detailed design • Jack Layton Ferry Terminal: Complete Implementation Strategy Plan • Implement one permanent public artwork as per the public art strategy, as well as 4-5 temporary public art activations • Substantial construction completion of the pedestrian and cycling bridge for The Bentway	$13
Next Generation Sustainable Communities (Quayside)	• Evaluate Master Innovation and Development Plan (MIDP) through Evaluation Framework • Execute Public and Stakeholder Engagement strategy on MIDP, including with governments • Prepare Business Implementation Plans (BIPs) as required for the MIDP and in support of municipal approval process Prepare and Negotiate Principle Implementation Agreements (PIAs) as required for the MIDP • Subject to approval of MIDP, initiate MIDP governance structure and PIAs as it relates to Real Estate, Infrastructure, Intellectual Property and Digital Governance	$10
Strategic Initiatives / Other	• Resiliency Assessment: Undertaking study to assess future climate risks and ongoing stresses • Build new corporate capabilities and competencies in fundraising and partnerships • Provide ongoing core support for the Port Lands	$0.5 $0.5 $5
Total		**$325**

Figures are in $ millions

Appendix 1: 2019/20 Funding Plan



Figures are in $ millions

***** The difference between total 2019/20 investments of $325 million and total 2019/20 funding of $312 million arises from work deferred from 2018/19 to 2019/20 with funding already in place in 2018/19.

****** The $10 million unfunded portion of the 2019/20 Plan relates to $7.6 million of costs associated with Quayside MIDP Development and $2.4 million of corporate operating costs, both of which will temporarily be funded with the Corporation's borrowing facility until future land sale revenues are realized.

Appendix 2: Five Year Financials

	Budget	Forecast				
	Fiscal Year 2019/20	**Fiscal Year 2020/21**	**Fiscal Year 2021/22**	**Fiscal Year 2022/23**	**Fiscal Year 2023/24**	**Total Expenditures**
Priority Projects						
The Port Lands	**$ 245.1**	**$ 264.7**	**$ 224.6**	**$ 171.7**	**$ 108.6**	**$1,014.7**
Flood Protection Landform	146.6	141.5	126.3	89.9	75.5	579.8
Roads and Services	31.7	47.0	45.6	43.0	14.9	182.2
Bridges	51.4	64.8	29.9	15.8	2.5	164.4
Parks and Public Realm	15.4	11.4	22.8	23.0	15.7	88.3
Complete Communities	**$ 50.8**	**$ 51.3**	**$ 48.4**	**$ 23.3**	**$ 12.2**	**$ 186.0**
Queens Quay East Revitalization	14.8	15.7	26.1	10.5	-	67.1
Other East Bayfront Public Realm	1.7	13.4	14.8	2.6	12.2	44.7
Bayside Infrastructure	11.4	10.9	5.4	9.1	-	36.8
Storm Water and Sanitary Sewer Infrastructure	15.8	2.7	0.5	0.2	-	19.2
Other	6.0	4.8	0.7	0.3	-	11.8
Quayside Soil & Environmental Management	1.0	1.1	0.9	0.6	-	3.6
Dockside Infrastructure	0.1	2.7	-	-	-	2.8
Public Places	**$ 13.2**	**$ 12.0**	**$ 17.6**	**$ 10.6**	**$ 2.6**	**$ 56.0**
York and Rees Street Park	3.7	8.6	10.7	5.3	0.1	28.4
Public Art	1.1	2.1	6.9	5.3	2.5	17.9
The Bentway	8.0	1.0	-	-	-	9.0
Jack Layton Ferry Terminal	0.4	-	-	-	-	0.4
Other	0.0	0.3	-	-	-	0.3
Next Gen Sustainable Communities	**$ 10.4**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 10.4**
Quayside MIDP Evaluation	10.4	-	-	-	-	10.4

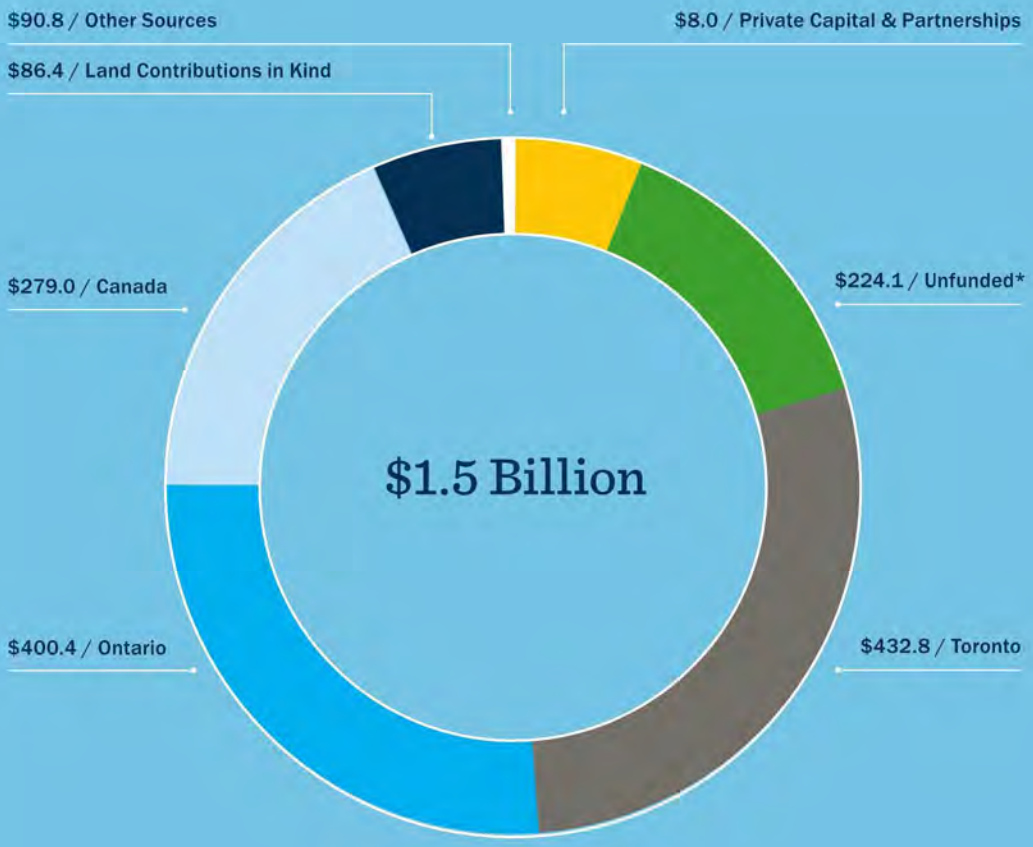
	Budget	Forecast				
	Fiscal Year 2019/20	**Fiscal Year 2020/21**	**Fiscal Year 2021/22**	**Fiscal Year 2022/23**	**Fiscal Year 2023/24**	**Total Expenditures**
Priority Projects						
Strategic Initiatives/Other	**$ 5.6**	**$ 5.1**	**$ 5.3**	**$ 5.0**	**$ 3.4**	**$ 24.4**
Non Recoverable Corporate Overhead	4.6	4.6	4.6	4.6	3.4	21.8
Innovative and Sustainability Initiatives	0.5	0.4	0.7	0.4	-	2.0
Other Initiatives	0.5	0.1	-	-	-	0.6
Subtotal—Priority Projects	**$ 325.1**	**$ 333.1**	**$ 295.9**	**$ 210.6**	**$ 126.8**	**$1,291.5**
New Potential Projects						
Signature Structure	-	-	10.0	30.0	40.0	80.0
Waterfront Walk	-	4.5	9.0	18.0	27.0	58.5
Jack Layton Ferry Terminal & Park	-	4.0	8.0	16.0	24.0	52.0
Destination Play at Promontory Park	-	1.3	2.5	5.0	6.3	15.1
Subtotal—New Potential Projects	**$ -**	**$ 9.8**	**$ 29.5**	**$ 69.0**	**$ 97.3**	**$ 205.6**
Grand Total	**$ 325.1**	**$ 342.9**	**$ 325.4**	**$ 279.6**	**$ 224.1**	**$ 1,497.1**

Figures are in $ millions

Note: The budget and forecast numbers above are inclusive of the annual corporate operating budget figures outlined in Appendix 3. Corporate operating costs are charged to projects based on direct staff hours required to deliver the project using a full cost recovery hourly rate. Full cost recovery hourly rates are determined based on actual direct costs of staff in the Development, Project Delivery and Planning & Design business units, together with a burden rate for indirect, core support costs such as occupancy costs, technology, audit fees, insurance, corporate communications and staff in core support roles such as accounting, finance, IT, legal and board governance, procurement and human resources.

As outlined on page 64, some projects do not currently have sufficient project funding to fully recover the indirect portion of the corporate operating cost, and as such Waterfront Toronto must use alternative sources of revenues to fund these.

Appendix 2: 2019/20–2023/24 Funding Plan



Figures are in $ millions

* The $224.1 million unfunded portion of the Five Year Strategic Plan comprises all of the New Potential Projects ($205.6 million) together with $11 million of corporate operating costs and $7.6 million of Quayside MIDP Evaluation costs. The New Potential Projects will not be initiated until funding has been secured for these projects. The remaining unfunded portion of $18.6 million will be temporarily funded with the Corporation's borrowing facility until future land sale revenues are realized.

Appendix 3: Corporate Operating and Capital Budgets

		Budget	Forecast			
Corporate Operating Budget	**2018/19**	**2019/20**	**2020/21**	**2021/22**	**2022/23**	**2023/24**
General and Office Administration	$ 1.4	$ 1.9	$ 1.9	$ 2.0	$ 1.8	$ 1.2
Accountability and Governance	0.4	0.4	0.4	0.4	0.4	0.4
Information and Technology	0.5	0.6	0.6	0.6	0.5	0.4
Human Resources	15.4	14.7	14.7	14.5	13.5	12.0
Public Engagement and Communication	0.6	0.6	0.6	0.6	0.6	0.5
Sub-total before Amortization	**$ 18.3**	**$ 18.2**	**$ 18.2**	**$ 18.1**	**$ 16.8**	**$ 14.5**
Amortization	$ 0.5	$ 0.5	$ 0.5	$ 0.4	$ 0.4	$ 0.3
Total Corporate Operating Budget	**$ 18.8**	**$ 18.7**	**$ 18.7**	**$ 18.5**	**$ 17.2**	**$ 14.8**
Corporate Operating Costs recovered from Projects	$ 14.2	$ 14.1	$ 14.1	$ 13.9	$ 12.6	$ 11.4
Corporate Operating Costs Funded by Other Sources	$ 4.6	$ 4.6	$ 4.6	$ 4.6	$ 4.6	$ 3.4
Total Corporate Operating Budget	**$ 18.8**	**$ 18.7**	**$ 18.7**	**$ 18.5**	**$ 17.2**	**$ 14.8**

Corporate Capital Budget	**2018/19** (revised)	**2019/20**	**2020/21**	**2021/22**	**2022/23**	**2023/24**
Technology Infrastructure	$ 1.3	$ 0.3	$ 0.3	$ 0.3	$ 0.3	$ 0.3
Fascilities Improvement	0.6	0.3	0.1	0.1	0.1	0.1
Total Corporate Capital Budget	**$ 1.9**	**$ 0.6**	**$ 0.4**	**$ 0.4**	**$ 0.4**	**$ 0.4**

Figures are in $ millions

Note: By first quarter 2019/20 we expect all major upgrades such as the Enterprise Resource Planning system and the office space reconfiguration to be complete. As such, the Corporate Capital Budget in this Plan is focused largely on maintaining a state of good repair. These costs are amortized over a three year and five year period respectively, and this cost is reflected above in the Amortization line within the Corporate Operating Budget.

Our Executive Team

Michael Nobrega
Interim President and CEO

Meg Davis
Chief Development Officer

Chris Glaisek
Chief Planning and Design Officer

David Kusturin
Chief Project Officer

Marisa Piattelli
Chief Strategy Officer

Lisa Taylor
Chief Financial Officer

Leslie Gash
Senior Vice President, Development

Julius Gombos
Senior Vice President, Project Delivery

Pina Mallozzi
Vice President, Planning and Design

Cameron MacKay
Vice President, Strategic Communications and Engagement

Kristina Verner
Vice President, Innovation, Sustainability, and Prosperity

Ian Beverley
General Counsel

Join us online

Waterfront Toronto

20 Bay Street, Suite 1310, Toronto, ON M5J 2N8

T. 416.214.1344 / info@waterfrontoronto.ca / waterfrontoronto.ca



DIGITAL STRATEGY ADVISORY PANEL - MEETING # 3

WATERFRONT TORONTO

20 BAY STREET, SUITE 1310

TORONTO, ON, M5J 2N8

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Meeting Book - Digital Strategy Advisory Panel - Meeting # 3

1:00 – 1:15 pm	1. Opening Session		
	a) Welcome & Introductory Remarks		M. Geist
	b) CEO's Remarks		M. Nobrega
1:15 – 1:20 pm	2. Approval of Minutes from Last Meeting	Approval	Panelists
	Draft Minutes 1st meeting of DSAP June 7 2018		
1:20 – 1:50 pm	3. Panel Mandate	Approval	Panelists
	20180427 Digital Strategy Advisory Panel Mandate		
1: 50 – 2:15 pm	4. Panel Workplan	Discussion & Approval	K. Verner/Panelists
	04 - DSAP Mandate 2018 Workplan		
2:15 – 2:30 pm	Break		
2:30 – 3:45 pm	5. Sidewalk Toronto Update: a) Plan Development Agreement Schedules b) Responsible Data Use Framework c) Process Moving Forward	Discussion	K. Verner/Panelists
	PDA July 31 Fully Executed		
	Sidewalk Toronto Responsible Data Use Framework		
3:45 - 4:00 pm	6. Other Business		Panelists
4:00pm	7. Adjournment		Panelists

MINUTES of the 1st meeting of the Digital Strategy Advisory Panel of the Toronto Waterfront Revitalization Corporation
20 Bay Street, Suite 1310, Toronto, Ontario
Thursday, June 7, 2018 at 11:00 a.m.

PRESENT: Michael Geist (Chair)
Alaina Aston
Andrew Clement
Dave Dame
Charles Finley
Darin Graham
Kurtis McBride
Saadia Muzaffar
Teresa Scassa
Jutta Treviranus
Mark Wilson

VIA PHONE Kevin Tuer

ABSENT: Carlo Ratti
Pamela Robinson (travelling with the Sidewalk Toronto Fellows)
John Ruffolo

IN ATTENDANCE Will Fleissig (President & CEO, Waterfront Toronto)
Meg Davis (Chief Development Officer, Waterfront Toronto)
Marisa Piattelli (Chief Strategy Officer, Waterfront Toronto)
Kristina Verner (Vice President IS&P, Waterfront Toronto)
Ian Beverley (General Counsel, Waterfront Toronto)
Sameer Akhtar (Senior Legal Counsel, Waterfront Toronto)
Claudia Landres-Hansen (Admin Assistant, Waterfront Toronto)
Chantal Bernier (External Legal Counsel, Dentons)
George Takash (External Legal Counsel, McCarthy-Tétrault)
Emma Greer (Carlo Ratti Associate)

The Chair, Michael Geist called the meeting to order at 11:00 a.m. with the consent of Panel Members.

Michael Geist declared that, in accordance with the Waterfront Toronto Digital Strategy Advisory Panel Mandate and Operating Protocol ("DSAP Mandate"), a quorum of Panel Members was present. The Chair called the meeting to order at 11:00am.

1. Meeting Agenda

ON MOTION duly made by Mark Wilson, seconded by Charles Finley and carried, it was **RESOLVED** that the Meeting Agenda was approved subject to the removal of Item 5 (Closed Session).

2. Opening Session

Will Fleissig and Michael Geist took turns in welcoming everyone to the first meeting of the Waterfront Toronto Digital Strategy Advisory Panel (the "Panel" or "DSAP") the panelists to the day's meeting. Will Fleissig expressed gratitude, on behalf of Waterfront Toronto, to the Panel members for taking the time to attend the meeting.

Panelists and other attendees introduced themselves.

3. Declaration of Conflicts of Interest

Jutta Treviranus advised that OCAD University signed an MOU with Sidewalk Labs on inclusive design research.

Emma Greer (on behalf of Carlo Ratti) advised on working on several projects with Sidewalk Labs that will be showcased at their offices at 307.

Darin Graham advised that he lives in the Designated Waterfront Area.

Charles Findley advised that IBI Group bids on RFPs for Waterfront Toronto from time to time. However, there is no active contract currently underway to the best of his knowledge.

Kurtis McBride advised that Miovision does business with the City of Toronto, a government stakeholder of the Corporation.

4. Process and Governance issues

The following sub-agenda items were discussed:

a) Open meeting protocols
b) Directors insurance
c) Code of conduct
d) Mandate

e) Meeting Scheduling & Workplan

Mandate

- The Panel is advisory to Waterfront Toronto Management.
- The Panelists are not authorized to speak on behalf of the Corporation or the Panel but are not precluded from speaking on non-Panel matters in other forums as long as they don't do so as representatives of the Corporation or the Panel.

Governance matters:

The following topics were raised and discussed:

- All meetings are open to the public except when in closed session, as provided for under Waterfront Toronto's By-Law No. 2.
- Ian Beverly extended an invitation to review the Freedom of Information policy on the website (https://bit.ly/2P43ZKE) so panelists were aware of what materials were subject to the Corporation's FOI policy.
- The matter of confidentiality both in terms of the Code of Conduct and the NDA were discussed. Closed session matters are confidential. The NDA is personal to the Panelist– information cannot be disclosed to the organization the Panelist works for.
- Although they are neither directors or officers of the Corporation, the Panel members will be covered by the Corporation's Directors' and Officers' Liability insurance if they sign the Indemnity Agreement.
- All potential conflicts should be put on the record proactively to deal with future conflict issues.
- The Code includes provisions relating to real estate interests in the Designated Waterfront Area.
- Panelists were asked to forward further suggestions and questions to Sameer Akhtar.

Roadmap and Workplan

Kristina Verner made a high-level road map presentation, introducing the anticipated flow of topics to be discussed.

A more detailed workplan will be presented at the next session.

5. Waterfront Toronto Overview

Marisa Piattelli provided background to Waterfront Toronto and the projects it has done.

6. Sidewalk Toronto Overview by Meg Davis and Josh Sirefman

a) Overview of partnership

Meg Davis introduced Quayside as a Waterfront Toronto owned property as well as a small portion of City owned land. Both Meg Davis and Josh Sirefman covered their respective organizations interests in engaging in the planning and development of Quayside, specifically the shared interest around innovation and sustainability.

Mr. Sirefman further discussed Sidewalk Labs as a company that is addressing the urbanist/technologist divide, which also carries core principals of not using technology without meaningful purpose and addressing the important elements of privacy as well as open standards.

Alaina Aston enquired about the business model of Sidewalk Labs as well as the general interest of Alphabet. Josh Sirefman explained that the business model is developing concurrently with project work.

Craig Nevill-Manning, Head of Engineering at Sidewalk Labs, delivered a presentation on creating the standard to create the benchmark for future development. He emphasized that data collection was not the goal of the project and the need to demonstrate a connection between data collection and an improved quality of life.

b) Responsible Data Use Framework

Alyssa Harvey-Dawson, General Counsel and Head of Legal, Privacy and Data Governance at Sidewalk Labs and Craig Nevill-Manning spoke of four areas grounded into the core principles for data handling which she stated were privacy, stewardship, access and security

Examples of this data collection were given, such as pothole detection and garbage volume monitoring, which at first mention, do not have significant privacy implications and can help the City understand whether to direct resources to certain areas. They emphasized the importance of the Digital Strategy Advisory Panel for ensuring that privacy implications are thoroughly considered through a critical lens.

Ms. Harvey-Dawson discussed the importance of aggregating data to avoid any privacy implications and explained the legal obligation to handle and use data responsibly. Once again this was linked to all data collection being in support of tangible results and beneficial purposes.

Lauren Reid, Director, Privacy and Data Governance for Sidewalk Labs, continued the conversation on the importance of responsibly handing data that can potentially impact people, and Canada's role in modelling itself on responsible innovation development. Further, she emphasized that there is a limited window of time to addressing these issues properly from ground up to find meaningful solutions.

The notion of defining "we" was addressed and who this is referring to when in slides and discussion. Ms. Harvey-Dawson noted that "we", is meant to be anyone (Sidewalk Labs, Waterfront Toronto, private corporations, Canadian tech, City Planners etc.), who can benefit from this data. It was agreed that "we" is confusing, and until products and policy are created this question will remain up in the air, but will need to be properly identified as the project continues

Concerns over the Sidewalk Labs branding and proprietary disclaimer on presentation slides was expressed by Andrew Clement. Ms. Harvey-Dawson acknowledged that this should be revised for future use.

Will Fleissig spoke to the requirement for continued coordination with all levels of government as the project evolves. He further explained that Waterfront Toronto is within arm's reach of Government/Council, but their separation exists as they are not supposed to be part of the same process (segregation of duty).

c) Working thoughts on data governance

Potential complications and risks involved with data use and data-driven decisions were discussed. Specifically, how do you address people and populations that are not represented in data collected from a decision-making standpoint? There are certain economic and cultural implications that can arise from this divide. Further, that these risks are amplified when if decisions are connected to automation and artificial intelligence.

Ms. Reid spoke to the artificial intelligence discussion as something that should be tabled for later, and that the conversation of data ethics, and building a process that constantly checks and coordinates with Canadian values and Toronto's diversity should be the top priority.

Issues of open standards were addressed as a precursor to prevent against monopolization. The need to assess the value of data and how the value is shared by both the public sector to the private sector was discussed. Concerns over vendor lock-in and proprietary solutions were also expressed.

John Whitrock, an engineer with Sidewalk Labs, spoke to the importance of creating the conditions for open innovation. He noted that this can only be done with participation from all stakeholder.
It was stated that Sidewalk Toronto will welcome third party audits and standards, to create the open digital infrastructure with best in-class security.

Mr. Clement raised a concern regarding the need to address the notion of surveillance infrastructure in terms of the solutions being implemented, and the tremendous amount of data sharing that is currently conducted without consent. Function creep is a concern that may develop over time, and the longevity of these standards need to be addressed. Ann Cavoukian, an advisor to Sidewalk Labs, discussed the use of strong de-identification tools at source, ones which reduce the reidentification to less that 0.3%.

7. Panelists feedback to Sidewalk Toronto

Panelists suggested greater clarity about which entity is being referred to when terms such as "we" are used.

Panelists reinforced the need to avoid data monopolization. Panelists expressed a desire to ensure that publicly funded data infrastructure not disproportionately benefit the private sector. There was also recognition that this project will require that the way data is handled, collected, will push the envelope in terms of the existing policy frameworks, and policy innovation is a key area that this project could have a positive impact.

7. Panelist closing thoughts

A round table opportunity was provided for Panelists to provide their initial reflections on the meeting. Generally, it was expressed that these were strong opening discussions and debates around these important topics. There are still many areas that need more information to be able to address them most effectively, but it was recognized that the Panel has a unique opportunity to meaningfully advance the work being done in these areas. It was also noted that there is a need for diligence to ensure Toronto's full diversity will be accounted for in decisions.

8. Termination of the Meeting

There being no further business, **ON MOTION**, duly made by Michael Geist, seconded Mark Wilson and carried, it was **RESOLVED** that the meeting be terminated at 16:07 p.m. local time.

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CONTENTS

1.0	BACKGROUND AND MISSION	2
2.0	PANEL COMPOSITION	2
3.0	ROLES AND RESPONSIBILITIES	5
4.0	RECORDING AND REPORTING OF PROCEEDINGS	7
5.0	COMMUNICATIONS AND MEDIA RELATIONS	7
6.0	CONFLICT OF INTEREST PROCEDURES	8
7.0	REVIEW PROCEDURES AND POLICIES HANDBOOK	10

DRAFT

WATERFRONT TORONTO

DIGITAL STRATEGY ADVISORY PANEL

MANDATE AND OPERATING PROTOCOLS

1.0 BACKGROUND AND MISSION

Toronto Waterfront Revitalization Corporation (Waterfront Toronto) recognizes the importance of policy development and digital governance issues involved with its innovation and intelligent community initiatives. Waterfront Toronto is committed to working closely with government stakeholders, the public, academia and industry experts to establish and maintain the required policy and accountability frameworks that will be critical to the success of these initiatives.

1.1 Background

The Waterfront Toronto Digital Strategy Advisory Panel (the Panel) was formed in 2018 by Waterfront Toronto as an independent body to guide and inform the revitalization of the Toronto waterfront on issues of digital governance. The Panel is advisory to Waterfront Toronto management.

1.2 Mission Statement

The mission of the Panel is to provide objective, professional advice to ensure that ethical use of technology, accountability, transparency, protection of personal privacy, data governance, cyber security together with the opportunity for broad and equitable benefits to be accrued from the intellectual property and data, are addressed in a robust way to encourage innovation and economic development and preserve the public good.

2.0 PANEL COMPOSITION

2.1 Scope

Panel members are expected to advise Waterfront Toronto on matters related to the following scope, which may be expanded as new initiatives come forward:

- Ethical Use of Technology
- Privacy
- Cybersecurity
- Data Governance
- Intellectual Property
- Shared Benefits/Business Models
- Commercial and Operating Agreements
- IT Architecture and Platforms

(Collectively, "**Digital Strategy**")

2.2 Panel Members

The Panel will consist of at least eight (8) individuals who are recognized as leaders or experts in their fields and are from a cross-section of society. The Panel will aim to include members with relevant experience drawn from the following groups or sectors:

- early stage companies or venture capital
- the civic technology space
- the Bar of Ontario or other jurisdiction
- larger companies
- academia
- government or public sector (including regulatory authorities)
- the broader community
- other representation considered appropriate from time to time.

2.3 Quorum

To ensure a fair and consistent review process, a quorum of 50% of appointed Panel members will be required for any Panel to convene.

If Panel members who are in attendance have a conflict of interest for a particular matter and must recuse themselves for that item, they shall still be counted for purposes of quorum for the Panel meeting.

2.4 Designees

The Waterfront Toronto CEO will appoint one Representative to the Panel, who is the primary point of contact between the Panel and Waterfront Toronto but is not a member of the Panel. The Waterfront Toronto Representative (or their designated staff) will be responsible for managing the administrative operations of the Panel, as well as setting the agenda for each Panel meeting in consultation with the Chair. The Representative will also be responsible for producing minutes of the meetings, which will become the official record of the Panel's deliberations and decisions, upon their review and approval by the Panel.

2.5 Selection of Members

Appointment of Panel members will take into consideration the individual's qualifications and demonstrated capabilities in relationship to Digital Strategy, their representation of segments of society, and other criteria determined by Waterfront Toronto from time to time.

The inaugural panel will be appointed by Waterfront Toronto.

As vacancies arise, Waterfront Toronto will solicit applications from qualified individuals. Panel members will be appointed by Waterfront Toronto in consultation with the Chair of the Panel.

2.6 Appointment of Panel Chair and Vice Chair

The Chair and Vice Chair of the Panel will be appointed by Waterfront Toronto from the members of the Panel. In the event that the Chair is not able to attend a Panel meeting, the Vice Chair will lead the meeting.

2.7 Duration of Appointments

Members will be appointed for terms of up to two years, subject to any earlier termination by Waterfront Toronto and may be re-appointed up to three times at the discretion of Waterfront Toronto, in consultation with the Panel Chair.

2.8 Attendance

Panel Members are expected to make best efforts to attend all Panel meetings throughout the year in person or, when appropriate, through fully-functioning video conferencing. Panel members may not miss more than two (2) consecutive meetings or more than three (3) meetings per year, or they may be removed from the Panel by Waterfront Toronto.

2.9 Compensation

Panel members will be compensated in the form of a per-meeting fee, as determined by Waterfront Toronto.

Travel expenses for those members residing outside of the GTA are reimbursed at a rate consistent with Waterfront Toronto's expense reimbursement policies and will be set out in writing at the time of appointment.

Panel members are not employees of Waterfront Toronto.

2.10 Indemnification

Panel members will be entitled to be indemnified by Waterfront Toronto, as permitted by law, for their actions as members of the Panel which will be supported by Waterfront Toronto's Directors' and Officers' Liability Insurance program.

2.11 Code of Conduct, Conflict of Interest and other Policies

Panel members will be required to comply with relevant Waterfront Toronto policies, including the Panel Code of Conduct and Conflict of Interest Procedures, and provide annual written certification of such compliance.

2.12 Confidentiality

As indicated in the Panel Code of Conduct and Conflict of Interest Procedures, Panel members will have a duty of confidentiality with respect to the activities and discussions of the Panel and any confidential information received in the course of their involvement with the Panel. Panel members will sign such documents and do such things as may reasonably be requested by Waterfront Toronto for purposes of maintaining confidentiality.

2.13 Board Liaison

A Board Liaison will be selected to serve as the primary point of contact between the Board and the Panel and will meet with Panel Chair on at least a quarterly basis. The Board Liaison is not a member of the Panel.

3.0 ROLES AND RESPONSIBILITIES

3.1 Policy Development

The Panel is formed, initially, to advise on developing policies and to make recommendations to Waterfront Toronto concerning Digital Strategy related to the Sidewalk Toronto initiative.

The Panel may provide advice relating to other initiatives that are consistent with the mandate of Waterfront Toronto, as set out in the *Toronto Waterfront Revitalization Corporation Act*, 2002, and that are within the Designated Waterfront Area.

3.2 Project Reviews

The Panel is expected to review a wide range of projects and initiatives, including:

- Telecommunications network proposals (including, but not limited to, fibre deployments, 5G deployments, public WiFi, etc.)
- Sensor deployments and other data-gathering efforts
- Infrastructure software, including middleware and identity management systems
- Waterfront-wide and location specific digital applications
- Pilot initiatives of new/emerging technologies

3.3 Other Activities

In addition to project reviews, the Panel will act as an advisor to Waterfront Toronto on related issues, such as requests for proposals, innovation procurement, contracts and scopes of work, charrettes and workshops, pilots and temporary installations or events. The Panel may provide advice in the following areas:

3.3.1 Review of related initiatives applications circulated by other stakeholders

The Panel may be asked to review relevant digital initiatives being considered for implementation in the Designated Waterfront Area by government stakeholders.

3.3.2 Advice on proposal calls

The Panel will provide advice to Waterfront Toronto on the innovation/digital/data components of requests for proposals calls, either as part of the initial developer selection process or upon selection of a development team, as requested.

3.3.3 Knowledge Sharing

Waterfront Toronto may bring information items, such as corporate strategies and communications plans, to the Panel for their information and/or review as deemed appropriate by Waterfront Toronto staff. Similarly, Panel members may share information items, such as the results of work they have been involved in, with the Waterfront Toronto for consideration in its policies and long-range visioning.

3.4 Conditions and Limitations

The critical input, comments and recommendations of the Panel are not binding on Waterfront Toronto. The Panel will provide recommendations to Waterfront Toronto for consideration in their decision-making process.

While the Panel may make suggestions and offer guidance on issues, it is not intended to generate alternative plans or solutions of its own. The Panel should in no way produce proposals in competition with those being prepared by other consultants and/or partners of Waterfront Toronto.

Waterfront Toronto shall not ask the Panel to act as a pro-bono consulting service, either for original work or to fill in gaps in the work of others.

The Panel is expected perform their work in a timely and appropriate manner that facilitates the work of Waterfront Toronto.

3.5 Administration

Waterfront Toronto will provide administrative support for the Panel. Waterfront Toronto will ensure that minutes and reports are drafted and circulated in a timely manner.

The activities of the Panel are funded by Waterfront Toronto. This includes administrative costs associated with: renting meeting space and equipment; producing materials for review sessions; travel and related expenses for out-of- town members of the Panel or invited guests; advertising of meeting times and locations; and administrative activities associated with writing meeting minutes, reports, letters, etc. on behalf of the Panel. Any expenditures relating to the Panel's activities will require prior approval by Waterfront Toronto through the Representative.

3.6 Meetings

3.6.1 Public Meetings

Except as provided in Section 3.6.2, meetings of the Panel shall be open to the public.

3.6.2 Closed Meeting Matters

Section 6.1 of By-Law No. 2 of Waterfront Toronto, (as it may be amended from time to time) applies to meetings of the Panel, with necessary modifications.

The Panel is permitted to conduct portions of its meetings in closed session (where members of the public are not present) only in circumstances where Section 6.1 of By-Law No. 2 would permit meetings of Waterfront Toronto to be held in closed session. These circumstances include where the subject matter being addressed by the Panel involves any of the following:

(a) The security of the property of Waterfront Toronto;

(b) Personal matters about an identifiable individual, including Panel members or employees of Waterfront Toronto;

(c) A proposed or pending acquisition or disposition of land;

(d) Labour relations or employee negotiations;

(e) Litigation or potential litigation, including matters before administrative tribunals, affecting the Panel, or the Corporation;

(f) Advice that is subject to solicitor-client privilege, including communications necessary for that purpose;

(g) Educating or training of the Panel if, at the Meeting, no Panel member discusses or otherwise deals with any matter in a way that materially advances the business or decision-making of the Panel;

(h) Any matter in respect of which Waterfront Toronto is authorized under legislation other than the Act to conduct a Meeting or a portion of a Meeting on a closed basis;

(i) Information explicitly supplied in confidence to Waterfront Toronto or to the Panel by Canada, a province or territory, a municipal government or an agency of any of them;

(j) A trade secret or scientific, technical, commercial, financial or labour relations information, supplied in confidence to Waterfront Toronto or to the Panel, which, if disclosed, could reasonably be expected to prejudice significantly the competitive position or interfere significantly with the contractual or other negotiations of a person, group of persons, or organization;

(k) A trade secret or scientific, technical, commercial or financial information that belongs to Waterfront Toronto and has monetary value or potential monetary value;

(l) A position, plan, procedure, criteria or instruction to be applied to any negotiations carried on or to be carried on by or on behalf of Waterfront Toronto;

(m) The consideration of whether any subject matter involves a matter referred to in (a) to (l) and whether to exclude the Public from the discussion of such matters; or

(n) A request under the Waterfront Toronto's Freedom of Information Policy, or under any applicable freedom of information legislation that may apply to Waterfront Toronto or any similar policy or legislation that may apply to the Panel.

Scheduled meetings will be posted on Waterfront Toronto's website, and meeting locations will be selected to accommodate members of the public. The public will not participate in the review process discussion unless specifically requested to do so by the Chair.

4.0 RECORDING AND REPORTING OF PROCEEDINGS

Official written records will be made of all public Panel proceedings. The primary vehicle for recording the proceedings will be meeting minutes. However, the Panel may also write letters with specific recommendations for Waterfront Toronto.

4.1 Meeting minutes

Published meeting minutes will serve as the official record of the Panel's deliberations. The minutes will be structured as a reference guide to issues and/or decisions made at the meeting, not a transcription of the proceedings.

4.2 Letters to Waterfront Toronto

The Panel may choose to submit specific comments, recommendations, or concerns to Waterfront Toronto management staff or the Board Liaison in writing when it deems necessary. Similarly, Waterfront Toronto management staff or the Board Liaison may request comments, recommendations or clarifications of the Panel in writing when it feels it is in the best interests of Waterfront Toronto to do so.

5.0 COMMUNICATIONS AND MEDIA RELATIONS

The spokesperson for the Panel is the Panel Chair. No other Panel members should have direct contact with the media regarding the Panel, except in the instance where they are asked to clarify a comment made during the public meeting or directed to do so by Waterfront Toronto staff.

From time to time, Waterfront Toronto may be called on to clarify or comment on issues before the Panel. In that case, only the President and CEO, the Vice President of Innovation, Sustainability & Prosperity, and the Vice President of Communications and Public Engagement at Waterfront Toronto will be available for comment.

Only these spokespeople will participate in any discussions with regard to the Panel outside of the formal Panel meetings.

To ensure clarity in the work and communication of the work of the Panel to the public and to governments, Panel members will seek to coordinate any public comments that they may wish to make on matters relating to the work of the Panel with the Panel in advance.

Panel members are not permitted to engage with interested parties outside of the formal Panel review process, and likewise, Proponents are not permitted to engage with Panel members outside of the Panel review process, on any matters related to projects coming before the Panel. No Panel member may make representations on behalf of the Panel or Waterfront Toronto, without the prior consent of the Panel and Waterfront Toronto.

6.0 CONFLICT OF INTEREST PROCEDURES

Because of its public mandate, it is critically important that Waterfront Toronto preserve public confidence, trust and accountability. Accordingly, Waterfront Toronto expects that it, and all persons dealing with Waterfront Toronto in any manner, will conduct themselves in accordance with principles of fair and honest dealings and in the absence of actual or perceived Conflicts of Interest. Panel members are expected to meet both the letter and the spirit of the Conflict Procedures.

6.1 Definitions

For the purpose of these Conflict Procedures:

(a) "Conflict of Interest" means any personal or pecuniary interest, condition, connection, relationship, activity or circumstances as a result of which you are or might reasonably appear to be unable or potentially unable to provide an impartial and objective opinion, recommendation or assessment of facts in any circumstance and includes any other circumstance in which your individual interests might be taken to conflict with your duties to Waterfront Toronto.
(b) A "Material Interest" exists in any case in which a reasonable, well-informed person might fairly conclude that a person's interest in another entity or organization could affect the person's performance of a duty on behalf of Waterfront Toronto.

6.2 Conflict of Interest

You are responsible for taking all appropriate action to prevent a real, potential or apparent Conflict of Interest when carrying out your duties as a

Panel member.
You are required to make full and timely disclosure with respect to any potential Conflict of Interest. Conflicts of Interest may arise because you:

(i) are a party to a contract, proposed contract, project, proposed project or relationship with Waterfront Toronto;
(ii) are a party to a contract, proposed contract, project, proposed project or relationship with a third party who has or seeks a contractual relationship with Waterfront Toronto;
(iii) are a director or officer of any entity or organization that is a party to a contract, proposed contract, project, proposed project or relationship with Waterfront Toronto;
(iv) hold a Material Interest in any entity or organization that is a party to a contract, proposed contract, project, proposed project or relationship with Waterfront Toronto; or
(v) have any other interest that might be perceived as creating a conflict with your duty to act solely in the best interests of Waterfront Toronto.

6.2.1 Material Effect

If, in the opinion of the Panel Chair, a Conflict of Interest may exist in principle, but it is not of such a nature as might be likely to have or fairly be perceived to have any material effect on the execution of your duties as a Panel member, the Panel Chair may permit the condition to continue on such terms and conditions as may be specified. Any permission of this sort must be in writing, or properly recorded in relevant meeting minutes, to be effective.

6.2.2 Suspected Conflicts of Interest

All reported or suspected Conflicts of Interest will be investigated initially by the Panel Chair. In order to resolve the matter, the Panel Chair may seek the advice of any or all of the Waterfront Toronto Representative, the Ethics Advisor and internal and external counsel. If it is determined that a Conflict of Interest exists, the conflicted Panel Member will be notified immediately by the Panel Chair.

6.2.3 Participation in the Panel Review

You may not participate in any aspect of the review of a contract, proposed contract, project, proposed project, matter or relationship with which you have a Conflict of Interest (subject to any permission granted under section 6.2.1).

6.2.4 Attendance at Panel Meetings

You may not attend any of the portions of a Panel meeting during which any contract, proposed contract, project, proposed project, matter or relationship with which you have a Conflict of Interest is being reviewed (subject to any permission granted under section 6.2.1). Conflicted Panel Members must leave the room until the review of the item is concluded.

6.3 Breach of Conflict of Interest Procedures

Any breach of these Conflict Procedures will be treated very seriously and

may result in removal from the Panel or other necessary action being taken.

6.4 Where to Seek Clarification
If you require advice on a potential conflict, or if you suspect improper activities, you should seek clarification from the Panel Chair. In addition, the Ethics Advisor and Waterfront Toronto's internal and external legal counsel are available to speak with you, at the expense of Waterfront Toronto, about the Conflict Procedures and how they apply to you.

6.5 **Examples of Potential Conflicts of Interest that Should be Disclosed**
Relevant Conflicts of Interest include legal conflicts, business conflicts, personal and relationship conflicts and any other circumstances as a result of which the public may lose confidence in the Panel or Waterfront Toronto.

The following are examples of potential Conflicts of Interest:

- Influencing a decision of the Panel with respect to a company or firm in which the Panel Member, a member of his or her immediate family or a person with whom there exists, or has recently existed, an intimate personal relationship, has a financial interest.

- Accepting gifts, benefits or favours from individuals or firms involved, in any way, in presentations to the Panel, with the exception of minor gifts as token courtesies.

- Using for personal gain, or advantage of any kind, any information acquired as a result of the Panel Member's activities on the Panel which is not available to the general public;

These examples are not exhaustive.

7.0 REVIEW PROCEDURES AND POLICIES HANDBOOK

Waterfront Toronto may develop a Review Procedures and Policies Handbook that provides further direction on the types of projects to be reviewed, the specific issue areas to be considered in those reviews, as well as the structure of the review process itself. If developed, the Panel will adopt such a Review Procedures and Policies Handbook. The Review Handbook may be updated from time to time to reflect evolving practices of the Panel.

1. Background & Mission

Toronto Waterfront Revitalization Corporation (Waterfront) recognizes the importance of policy development and digital governance issues involved with its innovation and intelligent community initiatives. Waterfront Toronto is committed to working closely with government stakeholders, the public, academia and industry experts to establish and maintain the required policy and accountability frameworks that will be critical to the success of these initiatives.

1.1 Background

The Waterfront Toronto Digital Strategy Advisory Panel (the Panel) was formed in 2018 by Waterfront Toronto as an independent body to guide and inform the revitalization of the Toronto waterfront on issues of digital governance. The Panel is advisory to Waterfront Toronto management.

1.2 Mission Statement

The mission of the Panel is to provide objective, professional advice to ensure that ethical use of technology, accountability, transparency, protection of personal privacy, data governance, cyber security together with the opportunity for broad and equitable benefits to be accrued from the intellectual property and data, are addressed in a robust way to encourage innovation and economic development and preserve the public good.

WATERFRONT TORONTO
Finance, Audit and Risk Management Committee Work Plan – 2017

DSAP Panel Mandate: **Note: Open Session Items are in blue, potential closed session items are in red. TBD or combined open/closed items are in purple.**	**Aug 16/18**	**Oct 18/18**	**Dec 13/18**	**Jan 17/19**	**As required**
(i) At least annually prior to March 31, review and approve the overall scope of the work plan for the panel.	Approve initial mandate Review Work Plan	Approve Work Plan through January, 2019			X
Policy Development					
(i) The Panel is formed, initially, to advise on developing policies and to make recommendations to Waterfront Toronto concerning Digital Strategy related to the Sidewalk Toronto initiative.	PDA Policy Discussion & MIDP guidance	Initial discussion on MIDP components	Initial discussion on MIDP content	Continued discussion and recommendati-ons re: MIDP content	
(ii) The Panel may provide advice relating to other initiatives that are consistent with the mandate of Waterfront Toronto, as set out in the Toronto Waterfront Revitalization Corporation Act, 2002, and that are within the Designated Waterfront Area.					X
Project Reviews					
The Panel is expected to review a wide range of projects and initiatives, including: • Telecommunications network proposals (including, but not limited to, fibre deployments, 5G deployments, public WiFi, etc. • Sensor deployments and other data-gathering efforts • Infrastructure software, including middleware and identity management systems • Waterfront-wide and location specific digital applications • Pilot initiatives of new/emerging technologies		Product deputations from SWL and affiliates.	Product deputations from SWL and affiliates.		X

Other Activities In addition to project reviews, the Panel will act as an advisor to Waterfront Toronto on related issues, such as requests for proposals, innovation procurement, contracts and scopes of work, charrettes and workshops, pilots and temporary installations or events. The Panel may provide advice in the following areas:						
(ii)	Review of related initiatives applications circulated by other stakeholders The Panel may be asked to review relevant digital initiatives being considered for implementation in the Designated Waterfront Area by government stakeholders.	Direction re: Civic Labs	Review of Report from October Civic Lab - Discussion re: future Labs	Review of Report from November & December Civic Labs -		X
(iii)	Advice on proposal calls The Panel will provide advice to Waterfront Toronto on the innovation/digital/data components of requests for proposals calls, either as part of the initial developer selection process or upon selection of a development team, as requested.					X
(iv)	Knowledge Sharing Waterfront Toronto may bring information items, such as corporate strategies and communications plans, to the Panel for their information and/or review as deemed appropriate by Waterfront Toronto staff. Similarly, Panel members may share information items, such as the results of work they have been involved in, with the Waterfront Toronto for consideration in its policies and long-range visioning.	Direction re: White Paper Series				X

PLAN DEVELOPMENT AGREEMENT

BETWEEN

TORONTO WATERFRONT REVITALIZATION CORPORATION

AND

SIDEWALK LABS LLC

DATED the 31st day of July, 2018

TABLE OF CONTENTS

ARTICLE I PLAN DEVELOPMENT OBJECTIVES AND ROLES 1

1.01 The Parties 1
1.02 Shared Mission 2
1.03 Roles of the Parties 3
1.04 The RFP 4
1.05 Master Innovation and Development Plan – Joint Objectives 5
1.06 No Interest in Land or Sale of Land 5

ARTICLE II IMPLEMENTATION PLANNING 5

2.01 Implementation Agreements 5
2.02 Methodologies 6
2.03 Procurement Principles 6

ARTICLE III APPROVALS 6

3.01 Approvals 6

ARTICLE IV INITIAL PLAN MILESTONES 7

4.01 Satisfaction of Initial Plan Milestones 7

ARTICLE V MIDP PROJECT FUNDING 8

5.01 The Budget and Detailed Budget 8
5.02 Funding of MIDP Planning 9

ARTICLE VI COORDINATION 10

6.01 Business and Implementation Plans 10
6.02 Other Coordination 10
6.03 Public Communications and Government Relations 11
6.04 Project Management Committee 11

ARTICLE VII INTELLECTUAL PROPERTY; PRIVACY & DATA GOVERNANCE 11

7.01 Intellectual Property 11
7.02 Privacy & Data Governance 12

ARTICLE VIII REPRESENTATIONS 12

8.01 Representations of Waterfront Toronto 12
8.02 Representations of Sidewalk Labs 13

ARTICLE IX TERM 13

9.01 Term 13
9.02 Survival 14
9.03 Unspent Funds 14

ARTICLE X CONFIDENTIALITY 15

10.01 Freedom of Information and Confidentiality Policies 15

ARTICLE XI EXCLUSIVITY 15

11.01 Exclusivity 15

ARTICLE XII ADDITIONAL LANDS 15

12.01 Additional Lands 15

ARTICLE XIII ADMINISTRATION 16

13.01 Notices to Parties 16
13.02 Change of Address 16
13.03 Deemed Receipt of Notices 17

ARTICLE XIV GENERAL 17

14.01 Assignment and Change of Control 17
14.02 RFP Process and Designation 17
14.03 Waiver 18
14.04 Indemnity 18
14.05 Release; No Consequential Damages 19
14.06 Entire Agreement 19
14.07 Severability 20
14.08 Relationship of the Parties 20
14.09 Amendment 20
14.10 No Third-Party Beneficiaries 20
14.11 Interpretation 20
14.12 Counterparts 20
14.13 Governing Law; Jurisdiction 21
14.14 Affiliates 21

SCHEDULE A DEFINITIONS AND INTERPRETATION 23

SCHEDULE B MIDP SCOPE 30

SCHEDULE C BUDGET 33

SCHEDULE D PROCUREMENT PRINCIPLES 36

SCHEDULE E MIDP SITE 38

SCHEDULE F COLLABORATION PRINCIPLES 39

SCHEDULE G INTELLECTUAL PROPERTY TERMS 41

SCHEDULE H FREEDOM OF INFORMATION AND CONFIDENTIALITY 44

SCHEDULE I DIGITAL GOVERNANCE FRAMEWORK PRINCIPLES 47

SCHEDULE J COMMUNICATIONS AND GOVERNMENT RELATIONS PRINCIPLES..... 51

THIS PLAN DEVELOPMENT AGREEMENT is made and effective as of the 31st day of July, 2018 (the "**Effective Date**").

BETWEEN:

TORONTO WATERFRONT REVITALIZATION CORPORATION

("**Waterfront Toronto**")

- and -

SIDEWALK LABS LLC

("**Sidewalk Labs**")

WHEREAS:

A. Sidewalk Labs and Waterfront Toronto wish to enter into this Agreement, among other reasons, to establish a roadmap for the planning phase of the Project involving the preparation and creation of a Master Innovation and Development Plan for the Project (the "**Master Innovation and Development Plan**" or "**MIDP**").

B. Because this Agreement reflects greater clarity and refinement of thinking about the Project than the Parties had the benefit of at the time they began their collaboration, this Agreement shall replace and supersede the Framework Agreement, dated as of October 16, 2017, by and among Sidewalk Labs, Sidewalk Toronto, Limited Partnership and Waterfront Toronto (the "**Framework Agreement**"), in its entirety.

NOW THEREFORE, in consideration of the foregoing, the covenants contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Sidewalk Labs and Waterfront Toronto agree as follows:

ARTICLE I
PLAN DEVELOPMENT OBJECTIVES AND ROLES

1.01 **The Parties**

(a) Waterfront Toronto was established pursuant to the *Toronto Waterfront Revitalization Corporation Act* (Ontario) (the "**Act**") by the Government of Canada, the Province of Ontario and the City of Toronto to plan, promote and guide the revitalization of Toronto's waterfront lands. Pursuant to the MOU, as referenced in the Second Contribution Agreement, Waterfront Toronto is the revitalization lead for the Port Lands and East Bayfront (in each case, as defined in the MOU), which mandate includes building a waterfront of international renown and developing sustainable, balanced and healthy communities and commercial districts that address public policy priorities. Pursuant to its corporate vision, Waterfront Toronto's core revitalization objectives that will inform the development of the MIDP are:

(i) Neighbourhood – Advancing complete communities that address the need for housing, mobility and access, connectivity and inclusivity.

(ii) Sustainability – Promoting cutting-edge solutions to reduce carbon emissions, while promoting a high quality of life and improving public health.

(iii) Destinations – Creating enduring value through well-designed and vibrant cultural, recreational, civic and public spaces for residents and visitors.

(iv) Prosperity – Leveraging innovation and partnerships to deliver economic growth and new jobs.

(v) Engagement – Cultivating a high-performance and listening organization, promoting deep stakeholder trust, broad community outreach and consequential citizen feedback using robust data analysis and superior interactive web tools.

(b) Sidewalk Labs is an Alphabet Inc. subsidiary that was formed in 2015 with the mission of reimagining cities and accelerating innovation to address urban challenges and achieve new standards of sustainability, affordability, mobility and economic opportunity. Sidewalk Labs brings together a unique group of urban planners and developers and experienced engineers and designers to bridge the urbanist/technologist divide to enable more integrated and thoughtful placemaking. Pursuant to the RFP Submission Materials and its corporate vision, Sidewalk Labs' core objectives that will inform the development of the MIDP are:

(i) Innovation – Establishing a framework for one of the world's most innovative urban districts.

(ii) Quality of Life – Enabling a meaningfully superior quality of urban life, including cost of living savings for a diverse population of residents, employers and employees.

(iii) Diverse and Robust Economy – Attracting and sustaining a diverse twenty-first century economy, including a cluster focused on urban innovation.

(iv) Blueprint for Cities – Developing plans, innovations and ideas that can be replicable in cities elsewhere.

1.02 **Shared Mission**

(a) These mandates, missions and goals of Waterfront Toronto and Sidewalk Labs are highly aligned.

(b) Shared Objectives

(i) Both Waterfront Toronto and Sidewalk Labs are committed to a new, first of its kind, innovative approach to city-building that combines world-class urban design and cutting-edge technology in order to deliver transformative benefits in quality of life to a diverse set of city residents, workers and visitors.

(ii) Both Parties believe in the potential for technology to improve urban life and to create people-centered communities that are more livable, connected, prosperous and resilient.

(iii) Both Parties seek to establish a complete community that serves as a model for sustainable and resilient neighborhoods throughout Toronto and cities around the world.

(iv) Both Parties aim to create a destination for people, companies, startups, and local organizations to advance solutions to the challenges facing cities, such as energy use, housing affordability, and transportation, and make Toronto the global hub of a rising new industry focused on urban innovation.

(c) Shared Principles

(i) Both Parties are committed to diversity and the inclusion of people of all ages, abilities, backgrounds, and incomes.

(ii) Both Parties believe technology has the potential to improve quality of life in cities, but that people must always come first.

(iii) Both Parties respect privacy and believe in open standards that enable innovation by local government, researchers, companies, community groups, and the general public.

(iv) Both Parties recognize the value in strong collaborations: the success of the Project depends on the support and confidence of government and the public.

1.03 **Roles of the Parties**

(a) Waterfront Toronto will have the following responsibilities and roles in connection with the creation of the MIDP:

(i) In accordance with the MOU, and subject to the approvals necessary for applicable Business and Implementation Plans, acting as revitalization lead in the public interest;

(ii) In accordance with the MOU, preparing Business and Implementation Plans, as set out in more detail in Section 4.01(a);

(iii) Working with Sidewalk Labs to develop the financial model and implementation phasing for the Project that seeks to make the Project financially viable and developing the business case for the MIDP, taking into account land value, Intellectual Property and infrastructure plans and any related standards or requirements;

(iv) Overseeing digital governance elements of the MIDP, including through the Digital Strategy Advisory Panel in accordance with the Digital Governance Framework Principles;

(v) Collaborating with Sidewalk Labs with respect to the achievement of the vision and goals of the Parties as summarized in Section 1.02 of Schedule B hereto, including with respect to sustainability, buildings, community and city services, public realm, mobility and digital platform;

(vi) Through the Project Management Committee, coordinating design of the built environment, including public realm, with the Waterfront Toronto Design Review Panel, which provides objective, professional advice about all facets of planning, design and development within the Designated Waterfront Area;

(vii) In accordance with the GR/PR Principles, liaising with the Province of Ontario, Government of Canada, the City of Toronto and other key stakeholders throughout the process;

(viii) In accordance with the GR/PR Principles, planning, coordinating and engaging in consultations with the wider community (including residents and the local development and technology communities); and

(ix) Acting in the public interest with respect to the MIDP and the Project.

(b) Consistent with the RFP and RFP Submission Materials, Sidewalk Labs will have the following responsibilities and roles in connection with the creation of the MIDP:

(i) Providing urban planning and engineering expertise to inform the MIDP, including with respect to plans for technology and other innovations (including Purposeful Solutions), including insights based on first principles of city-building;

(ii) Providing financial support for the creation of the MIDP by funding the Sidewalk Funding Commitment as set forth in Section 5.02;

(iii) Working with Waterfront Toronto to develop the financial model and implementation phasing for the Project that seeks to make the Project financially viable and determining economic, financial and market constraints on the Project;

(iv) Collaborating with Waterfront Toronto with respect to the achievement of the vision and goals of the Parties as summarized in Section 1.02 of Schedule B hereto, including with respect to sustainability, buildings, community and city services, public realm, mobility and digital platform; and

(v) In accordance with the GR/PR Principles, planning, coordinating and engaging in consultations with the wider community (including the local development and technology communities).

1.04 **The RFP**

(a) In March 2017, Waterfront Toronto issued Request for Proposals No.: 2017-13 (the "**RFP**") for an Innovation and Funding Partner (as defined in the RFP), and Sidewalk Labs, after having explored opportunities all over the world, recognized the unique opportunity presented by the RFP and answered its call, presenting a vision in its RFP Submission Materials for a new type of neighbourhood that utilizes Sidewalk Labs' unique combination of technology, urban development expertise and flexible funding approaches to establish a new model for city-building in the twenty-first century.

(b) Following a rigorous, fair and transparent selection process, Waterfront Toronto awarded the RFP to Sidewalk Labs, and in October 2017, the Parties publicly announced their collaboration. To formalize their relationship in connection with the Project, the Parties entered into the Framework Agreement. The Framework Agreement provided an initial protocol for the Parties to further define their collaboration in this Agreement with the benefit of engagement with the public and a broad set of public and private sector stakeholders.

(c) This Agreement shall supersede the Framework Agreement in its entirety.

1.05 **Master Innovation and Development Plan – Joint Objectives**

(a) In furtherance of their shared goals and vision, the Parties will work together collaboratively, diligently and in good faith to jointly prepare the MIDP in accordance with the MIDP Scope, including the MIDP Targets set out in Schedule B, and all other terms of this Agreement. The Parties will seek to create the MIDP in a way that is in keeping with the spirit, vision and aspirations represented by the RFP and RFP Submission Materials.

(b) The Parties acknowledge and agree that the MIDP will be a co-created overall plan consisting of multiple integrated, consistent, and cohesive sub-plans and ideas, on, for example, infrastructure, public realm, mobility, sustainability, affordability, accessibility, and built environment. The creation of such a plan does not itself signal any right to implement all or any part of it. To the contrary, the Parties acknowledge that in many cases, the implementation of plans contained in the MIDP will be subject to various contingencies, such as the receipt of certain governmental approvals and clearances, approvals of or agreements with landowners or other third-party consents.

1.06 **No Interest in Land or Sale of Land**

(a) The Parties further acknowledge that the inclusion of plans in the MIDP with respect to any particular parcel or area in no way implies control, ownership or other rights with respect to such parcel or area. The Parties acknowledge that Waterfront Toronto owns only Quayside WT and not any other parcel, and that this Agreement does not create any real property interest in Quayside WT and that the Sidewalk Funding Commitment does not constitute a payment towards any real property interest in Quayside WT. Further, the Parties acknowledge that this Agreement is not intended to, does not and cannot, bind or otherwise encumber, or transfer any ownership of, any land, not owned by Waterfront Toronto to Sidewalk Labs or to any other person, and that this Agreement does not create any real property interest in any such land.

(b) Waterfront Toronto and Sidewalk Labs acknowledge that the Quayside Parcel includes land owned by the City of Toronto, CreateTO, TPLC and private landowners. The MIDP will include business proposals related to these lands, for consideration by the Parties.

ARTICLE II
IMPLEMENTATION PLANNING

2.01 **Implementation Agreements**

(a) The MIDP will address the principal commercial terms for the potential implementation of the MIDP. The main agreements between the Parties to implement the MIDP are referred to herein as the "**Principal Implementation Agreements**." Waterfront Toronto and Sidewalk Labs will seek to

finalize the Principal Implementation Agreements in connection with, and subject to, the receipt of approvals necessary to proceed.

(b) The Parties acknowledge that other agreements may be required in connection with the Project from time to time (the "**Future Implementation Agreements**"). The Principal Implementation Agreements and Future Implementation Agreements shall be referred to together as the "**Implementation Agreements**."

(c) The Implementation Agreements will include, among other things, customary commercial terms that are mutually acceptable to the Parties and provide appropriate and reasonable comfort regarding the satisfaction of each Party's obligations.

2.02 **Methodologies**

(a) The Principal Implementation Agreements will include a "land methodology" containing agreed methodologies for the valuation of Quayside Parcel and compensation to Waterfront Toronto in respect thereof, which is expected to be based on the fair market value of Quayside Parcel as determined by a third-party, Appraisal Institute of Canada qualified, appraiser in accordance with agreed principles and on an agreed basis to be set out in the MIDP.

(b) The Parties acknowledge that the program set out in the MIDP, if implemented, may ultimately impact the fair market value of the Quayside Parcel.

(c) The Principal Implementation Agreements or Future Implementation Agreements will, if opportunities arise for Waterfront Toronto to contribute funding or other value to intellectual property or infrastructure opportunities, include an "intellectual property methodology" or "infrastructure methodology," respectively, providing agreed methodologies on the valuation thereof, and profit-sharing or other compensation to Waterfront Toronto in respect of its contributions thereto.

(d) Sidewalk Labs and Waterfront Toronto will determine the nature of their relationship in proceeding to implementation of the MIDP, if approved.

2.03 **Procurement Principles**

(a) The Procurement Principles attached as Schedule D hereto will apply to the Project.

(b) The Principal Implementation Agreements shall also specify that any procurement for a third party developer (or developers) to proceed with the design and construction of any above-grade buildings on the Quayside Parcel will be led by Waterfront Toronto and undertaken jointly by Waterfront Toronto and Sidewalk Labs. The MIDP and/or Principal Implementation Agreements will identify those circumstances and conditions under which Sidewalk Labs will act as vertical developer.

ARTICLE III
APPROVALS

3.01 **Approvals**

(a) The MIDP will be subject to the approval of each of Waterfront Toronto, in its sole, absolute and unfettered discretion (including the approval of its board of directors and any Additional Approvals on which Waterfront Toronto elects to condition its approval, the "**Waterfront Toronto Approval**") and Sidewalk Labs, in its sole, absolute and unfettered discretion (the "**Sidewalk**

Approval"). Sidewalk acknowledges that, in addition to the approval of the Waterfront Toronto board, Waterfront Toronto may, at its option, seek the approval of the MIDP by any or all of the Three Orders of Government (the "**Additional Approvals**") and that the Waterfront Toronto Approval shall not be deemed to have been given until Waterfront Toronto has obtained the approval of its board of directors and obtained any Additional Approvals on which it has elected to condition its approval. The MIDP will also be subject to the review and input of the Waterfront Toronto Design Review Panel and Digital Strategy Advisory Panel.

(b) Upon completion of the approval steps set out in Section 3.01(a), the Parties will proceed to finalize, execute and deliver the Principal Implementation Agreement(s), subject to Waterfront Toronto Approval and Sidewalk Approval (for the avoidance of doubt, in each case, it is sole, absolute and unfettered discretion) such Principal Implementation Agreement(s).

(c) Waterfront Toronto shall not seek Waterfront Toronto Approval, and Sidewalk Labs shall not seek Sidewalk Approval, in each case until such time as is mutually agreed by the Parties.

ARTICLE IV
INITIAL PLAN MILESTONES

4.01 **Satisfaction of Initial Plan Milestones**

(a) The Parties hereby agree that the initial plan milestones on which the Second Funding Commitment is contingent (the "**Initial Plan Milestones**") are all satisfied as of the date hereof, either prior to the execution of this Agreement or upon and through the execution of this Agreement, as more particularly described below:

(i) Flood Mitigation. The Initial Plan Milestone relating to the receipt of flood mitigation financing is satisfied by the execution and delivery of (i) the Cherry Street Stormwater & Lakefilling Project Delivery Agreement between the City of Toronto and Waterfront Toronto, dated as of May 31, 2017 (the "**First Contribution Agreement**"), which sets out the Three Orders of Government commitment to fund the Cherry Street Stormwater & Lakefilling Project in an amount up to CAN$65 million, and (ii) the Port Lands Flood Protection and Enabling Infrastructure Project Contribution Agreement, by and among Her Majesty the Queen in Right of Canada as represented by the Minister of Infrastructure, Communities and Intergovernmental Affairs, Her Majesty the Queen in right of the Province of Ontario, represented by the Minister of Infrastructure, the City of Toronto represented by the Deputy City Manager, Cluster B and Waterfront Toronto, dated as of May 1, 2018 (the "**Second Contribution Agreement**" and, together with the First Contribution Agreement, collectively the "**Contribution Agreement**"), which commits the public sector bodies to fund the Port Lands Flood Protection and Enabling Infrastructure Project in an amount up to CAN$1.185 billion, in each case for the re-naturalization of the Don River and the flood protection of the Lower Don Lands and the Port Lands.

(ii) Waterfront Toronto Mandate. The Initial Plan Milestone relating to the reaffirmation of Waterfront Toronto's mandate to carry out the planning and implementation of development in relation to the Project is satisfied by various Council decisions and by City Staff Report (Ex30.9) dated January 16, 2018, which provides, among other things, that the "relationship between the City,

Waterfront Toronto, and the Toronto Economic Development Corporation (TEDCO, now controlled by Toronto Realty Agency) is defined in a three-party Memorandum of Understanding approved by Council in 2006, which MOU "identifies a lead implementation role for Waterfront Toronto in the 'Designated Waterfront Area' for precincts that have Council-approved Business and Implementation Plans" and that such "lead implementation role includes overall responsibility for revitalization matters including preparation of Business and Implementation Plans, site investigations, environmental remediation and risk management, site preparation work, hard services and other public realm improvements, and directing the transfer of development lands to third party purchasers or ground lease tenants."

(iii) Agreement on Scope of Business and Implementation Plans. The Initial Plan Milestone relating to agreement on the scope of the BIPs is satisfied by the Parties' agreement with respect to the relationship of the BIPs and the MIDP as set forth in Section 6.01 of this Agreement.

(iv) Agreement on Scope of Master Innovation and Development Plan. The Initial Plan Milestone relating to agreement on the scope of the MIDP is satisfied by the Parties' agreement on the MIDP Scope attached as Schedule B hereto.

(v) Fair Procurement Standards. The Initial Plan Milestone relating to the Parties' agreement on fair and arms'-length procurement standards is satisfied by the Parties' agreement on the Procurement Principles attached as Schedule D hereto.

ARTICLE V
MIDP PROJECT FUNDING

5.01 The Budget and Detailed Budget

(a) The Parties hereby approve the budget attached hereto as Schedule C as the initial budget for the planning, creation and approval of the MIDP (as modified from time to time as permitted by this Agreement, the "**Budget**"). The Parties shall use commercially reasonable efforts to ensure that adequate resources and staff with the requisite ability and expertise are committed to the Project in accordance with the Budget.

(b) Sidewalk Labs will reimburse Waterfront Toronto for its reasonable, documented, out-of-pocket expenses incurred in connection with the creation of the MIDP, in an amount up to the quarterly cap set forth in item number three of the Budget and subject to the overall Sidewalk Funding Commitment (the "**Waterfront Toronto Reimbursables**"). On or promptly following the first quarter end following execution of this Agreement, Sidewalk Labs will pay Waterfront Toronto the Waterfront Toronto Reimbursables in respect of the period beginning October 16, 2017 and ending December 31, 2017, for the quarter beginning January 1, 2018 and ending March 31, 2018 and for the quarter beginning April 1, 2018 and ending June 30, 2018, and thereafter Sidewalk Labs will pay Waterfront Toronto the Waterfront Toronto Reimbursables on a quarterly basis (up to the end of the Term of this Agreement or December 31, 2018, whichever is earlier) and subject to the overall Sidewalk Funding Commitment; provided that on or before the earlier of January 1, 2019 and any public release of a draft MIDP, Sidewalk Labs will, through the Project Management Committee, allocate sufficient funds for the Waterfront Toronto Reimbursables for 2019. The Parties may, by mutual agreement in writing, agree to increase or decrease the amount of the Waterfront Toronto Reimbursables.

(c) In addition to the Budget attached as Schedule C, Sidewalk Labs shall prepare a more detailed budget (the "**Detailed Budget**") to supplement the Budget, which Sidewalk Labs shall provide to Waterfront Toronto in a soft format as reasonably required by Waterfront Toronto. The Detailed Budget will be managed by the Project Management Committee and will show expenditures (both incurred and anticipated in connection with the Project) against budget line items together with appropriate commentary and will be updated and provided to the Project Management Committee on a monthly basis, and Sidewalk Labs will provide any additional information or clarification reasonably requested by Waterfront Toronto. If the amount spent on a line item in the Budget or Detailed Budget is less than the amount budgeted for that line item, the savings will be reallocated to other existing or new line items under the supervision of the Project Management Committee.

(d) Both the Budget and the Detailed Budget will cover the anticipated and estimated uses of the Sidewalk Funding Commitment.

5.02 **Funding of MIDP Planning**

(a) Sidewalk Labs represents and warrants to Waterfront Toronto that it has financed and facilitated Project activities for the period up to and including the execution of this Agreement, but subject to such obligation being capped at US$10,000,000 (the "**First Funding Commitment**").

(b) Following the execution of this Agreement, Sidewalk Labs will fund the development and finalization of the MIDP up to and including the development and finalization, and prior to execution of, the Principal Implementation Agreements, but subject to such obligation being capped at US$40,000,000 plus any remaining and unspent funds from the First Funding Commitment (the "**Second Funding Commitment**"). The First Funding Commitment and the Second Funding Commitment is subject to an overall cap of US$50,000,000 (the "**Sidewalk Funding Commitment**").

(c) For the avoidance of doubt and notwithstanding anything herein to the contrary (except pursuant to any funding for 2019 as set forth in Section 5.01(b)), Sidewalk Labs shall not be liable to Waterfront Toronto for, and shall not be required to fund any amounts for, any costs other than Waterfront Toronto Reimbursables and/or any amounts that are in excess of the First Funding Commitment or Second Funding Commitment, as then applicable, and in no event shall be liable for or required to fund any costs (including the Waterfront Toronto Reimbursables) in excess of the Second Funding Commitment (provided that the Second Funding Commitment is not intended to limit the liability of Sidewalk Labs in the event of a default under this Agreement).

(d) Concurrently with the execution of this Agreement, Sidewalk Labs will deliver to Waterfront Toronto a comfort letter from Alphabet Inc., substantially in the form of the letter dated October 16, 2017, with respect to the Sidewalk Funding Commitment under this Agreement.

(e) Waterfront Toronto acknowledges that Sidewalk Labs' funding of the First Funding Commitment was, and the Second Funding Commitment will be, made through Sidewalk Toronto Limited Partnership, and that such funding obligation is an obligation of Sidewalk Toronto Limited Partnership, and Sidewalk Labs agrees to cause such funding to be made.

(f) The treatment of the Sidewalk Funding Commitment or a portion thereof will be considered by the Parties in the Principal Implementation Agreements and will be recognized within a distribution waterfall to the extent the Parties include any profit-sharing formula.

ARTICLE VI
COORDINATION

6.01 **Business and Implementation Plans**

(a) Pursuant to the MOU, as referenced in the Second Contribution Agreement, Waterfront Toronto is the revitalization lead for the Port Lands and East Bayfront (in each case, as defined in the MOU), which mandate includes building a waterfront of international renown and developing sustainable, balanced and healthy communities and commercial districts that address public policy priorities. Sidewalk Labs acknowledges that pursuant to the MOU, Waterfront Toronto will prepare one or more Business and Implementation Plans (the "**Business and Implementation Plans**" or "**BIPs**") and that each BIP will be created in consultation with City divisions and agencies, including CreateTO, and must be approved by City Council.

(b) Notwithstanding anything herein to the contrary, Waterfront Toronto will ensure that any BIP proposed, recommended and/or submitted by it or on its behalf to the City of Toronto for consideration, for the Quayside Parcel and for any additional parcels included in the MIDP is consistent with, and does not limit, conflict with or constrain, the terms included in the MIDP Scope or this Agreement or reasonably expected to be included in the MIDP and Implementation Agreements or, after approval of the MIDP, will be consistent with the MIDP. In preparing the BIP for Quayside Parcel and for any additional parcels, Waterfront Toronto will consult with Sidewalk Labs including in connection with the submission of, approval of, and/or communications with respect to, each such BIP.

(c) For the avoidance of doubt, any further BIPs in addition to the BIP for the Quayside Parcel will be developed in compliance with the above principles.

6.02 **Other Coordination**

(a) Waterfront Toronto has provided or shall promptly provide Sidewalk Labs with correct and complete copies of all Relevant Contracts. Notwithstanding the foregoing, Waterfront Toronto shall not be required to disclose any provision of a Relevant Contract entered into prior to the Effective Date if doing so would result in a breach of the confidentiality provisions of such Relevant Contract; provided, however, that Waterfront Toronto shall use its commercially reasonable efforts to obtain the required consent of the counterparty or counterparties to the Relevant Contract to permit such disclosure and shall allow for disclosure to the maximum extent that does not result in a breach of the Relevant Contract (including by providing summaries, excerpts or redacted copies, for example) and provided further, that with respect to any Relevant Contract entered into after the Effective Date, Waterfront Toronto shall use commercially reasonable efforts to avoid any prohibition on disclosing such Relevant Contract to Sidewalk Labs (and if a counterparty refuses to permit disclosure to Sidewalk Labs, Waterfront Toronto shall notify the Project Management Committee thereof). Without the prior written consent of Sidewalk Labs, not to be unreasonably withheld, Waterfront Toronto shall not enter into, terminate, extend, amend, assign or compromise or waive any rights or claims under any Key Contract, or, if it would limit, conflict with or constrain, the terms included in the MIDP Scope or this Agreement or reasonably expected to be included in the MIDP and Implementation Agreements, under any other Relevant Contract. Waterfront Toronto shall cooperate and consult with Sidewalk Labs in connection with Planning Initiatives of which it is aware.

(b) Sidewalk Labs shall provide to Waterfront Toronto copies of all final versions of relevant plans, reports, surveys and designs created or acquired by Sidewalk Labs in the course of the creation of the MIDP and funded by the Sidewalk Funding Commitment, whether before or after the date of this Agreement, that cover all or a portion of the MIDP Site (the "**MIDP Materials**"). The Parties will also

share with one another drafts of relevant plans, reports, surveys and designs created or acquired in the course of the creation of the MIDP on an ongoing basis pursuant to the Collaboration Principles. Notwithstanding the foregoing, Sidewalk Labs shall not be required to disclose any MIDP Materials created or acquired prior to the Effective Date in a breach of the confidentiality of an engagement letter or other third-party Contract: provided however, that Sidewalk Labs shall use its commercially reasonable efforts to obtain the required consent of the relevant third party(ies) to permit such disclosure and shall allow for disclosure to the maximum extent that does not result in a breach of the relevant engagement letter or other Contract (including by providing summaries, excerpts or redacted copies, for example). Sidewalk Labs agrees to use its reasonable best efforts to deliver to Waterfront Toronto such reliance letters as Waterfront Toronto or the City of Toronto may require, each acting reasonably, entitling Waterfront Toronto and the City of Toronto, as required, to rely on any certified studies constituting MIDP Materials, and Sidewalk Labs further acknowledges that any approval of Waterfront Toronto or the City of Toronto of the MIDP may be conditioned or withheld if such reliance letters are not delivered.

(c) Sidewalk Labs shall ensure that no MIDP Materials acquired after the Effective Date are subject to confidentiality requirements which would prevent disclosure of same to Waterfront Toronto, except where the other party to the Contract objects to the disclosure to Waterfront Toronto for the purposes of protecting innovations, whereupon the matter will be referred to the Project Management Committee for resolution.

(d) Each Party acknowledges that any third-party materials provided to it by the other Party is provided for informational purposes only and without representation, warranty or recourse.

(e) The Parties acknowledge and agree that, except as expressly set forth in this Agreement, including the representations and warranties contained herein, there are no agreements, representations, promises, warranties, guarantees or conditions of any kind whatsoever, statutory or otherwise, expressed or implied by any of them, with respect to the condition, development potential, or viability of the Quayside Parcel or any other lands relating to the Project.

6.03 **Public Communications and Government Relations**

(a) The Communications and Government Relations Principles attached as Schedule J hereto (the "**GR/PR Principles**") will govern the planning, development, and implementation of all communications activities related to the development of the MIDP.

6.04 **Project Management Committee**

(a) The Collaboration Principles attached as Schedule F hereto (the "**Collaboration Principles**") set out provisions governing the collaboration of the Parties in creating the MIDP and finalizing the Principal Implementation Agreements. In accordance with the Collaboration Principles, the Project Management Committee shall be the primary venue through which coordination of the Parties in creating the MIDP is managed and overseen.

ARTICLE VII
INTELLECTUAL PROPERTY; PRIVACY & DATA GOVERNANCE

7.01 **Intellectual Property**

The Intellectual Property Terms attached as Schedule G hereto sets out provisions governing the Parties' rights and obligations with respect to Intellectual Property.

7.02 **Privacy & Data Governance**

The Digital Governance Framework Principles attached as Schedule I hereto sets out principles that will direct the Parties' approach with respect to privacy and data governance matters.

ARTICLE VIII
REPRESENTATIONS

8.01 **Representations of Waterfront Toronto**

Waterfront Toronto represents and warrants to Sidewalk Labs that:

(a) Waterfront Toronto is a non-share capital corporation incorporated and validly existing under the laws of the Province of Ontario and has all the requisite power and authority to carry on its business as it is currently being conducted.

(b) Waterfront Toronto has the requisite power, authority and capacity to execute, deliver and perform this Agreement, and to execute, deliver and perform all other agreements, instruments, undertakings and documents as are required by this Agreement to be done, executed, delivered or performed.

(c) (i) This Agreement has been duly authorized, executed and delivered by Waterfront Toronto; (ii) Waterfront Toronto has the necessary organizational power and authority to execute and deliver this Agreement and to perform its obligations hereunder, and no other organizational proceedings on the part of Waterfront Toronto are necessary to authorize the execution and delivery of this Agreement and the performance of Waterfront Toronto's obligations hereunder; and (iii) assuming this Agreement constitutes a legal, valid and binding obligation of Sidewalk Labs, this Agreement constitutes a legal, valid and binding obligation of Waterfront Toronto, enforceable against Waterfront Toronto in accordance with its terms, subject only to the enforcement of remedies by bankruptcy, insolvency, moratorium, winding-up, arrangement, reorganization, fraudulent preference and conveyance and other laws of general application affecting the enforcement of creditors' rights generally and general equitable principles and the fact that the availability of equitable remedies is in the discretion of a court and that a court may stay proceedings or the execution of judgments (collectively, the "**Enforcement Exceptions**").

(d) The execution, delivery, and performance by Waterfront Toronto of this Agreement does not and will not: (i) violate or conflict with its constating or organizational documents or enabling legislation; (ii) violate or conflict with any applicable Law; or (iii) result in any violation of or default under (with or without notice, lapse of time, or both), give rise to a right of termination, cancellation or acceleration of any obligation under, result in the loss of benefit under or result in the creation of any lien or other encumbrance on Waterfront Toronto's assets or properties under, any Contract to which Waterfront Toronto is a party or by which it or any of its properties or assets is bound or affected.

(e) (i) Waterfront Toronto has provided Sidewalk Labs with correct and complete copies of the MOU and the Contribution Agreement prior to the date hereof; (ii) each of the MOU and the Contribution Agreement is a valid and binding obligation of Waterfront Toronto and, to Waterfront Toronto's knowledge, each other party thereto, and is in full force and effect; (iii) Waterfront Toronto is not in breach of or default under the terms of the MOU or the Contribution Agreement; and (iv) Waterfront Toronto has not received any notice of or claim of default under the MOU or Contribution Agreement and is not aware of any party's intent to terminate the MOU or the Contribution Agreement.

8.02 **Representations of Sidewalk Labs**

Sidewalk Labs represents and warrants to Waterfront Toronto that:

(a) Sidewalk Labs is a limited liability company validly existing under the laws of Delaware and has all the requisite power and authority to carry on its business as it is currently being conducted.

(b) Sidewalk Labs has the requisite power, authority and capacity to execute, deliver and perform this Agreement, and to execute, deliver and perform all other agreements, instruments, undertakings and documents as are required by this Agreement to be done, executed, delivered or performed.

(c) (i) This Agreement has been duly authorized, executed and delivered by Sidewalk Labs; (ii) Sidewalk Labs has the necessary organizational power and authority to execute and deliver this Agreement and to perform its obligations hereunder, and no other organizational proceedings on the part of Sidewalk Labs are necessary to authorize the execution and delivery of this Agreement and the performance of its obligations hereunder; and (iii) assuming this Agreement constitutes a legal, valid and binding obligation of Waterfront Toronto, this Agreement constitutes a legal, valid and binding obligation of Sidewalk Labs, enforceable against it in accordance with its terms, subject only to the Enforcement Exceptions.

(d) The execution, delivery, and performance by Sidewalk Labs of this Agreement does not and will not: (i) violate or conflict with its constating or organizational documents; (ii) violate or conflict with any applicable Law; or (iii) result in any violation of or default under (with or without notice, lapse of time, or both), give rise to a right of termination, cancellation or acceleration of any obligation under, result in the loss of benefit under or result in the creation of any lien or other encumbrance on its assets or properties under, any Contract to which it is a party or by which it or any of its properties or assets is bound or affected

(e) As of the date hereof, Sidewalk Labs is not a party to any Contract that would inhibit or limit the plans, ideas, values or other concepts to be included in the MIDP.

(f) As of the date hereof, Sidewalk Labs is a wholly owned subsidiary of Alphabet Inc.

ARTICLE IX
TERM

9.01 **Term**

(a) This Agreement shall commence on the Effective Date and shall continue until the earliest to occur of the following (the "**Term**"):

(i) the date that the Parties mutually agree in writing to terminate this Agreement;

(ii) ten days following delivery of written notice by either Party to the other Party of its intent to terminate if Waterfront Toronto Approval or Sidewalk Approval of the MIDP or the Principal Implementation Agreements is sought and refused;

(iii) ten days following delivery of written notice by either Party to the other Party of its intent to terminate pursuant to and in accordance with the dispute resolution procedures set forth in the Collaboration Principles;

(iv) ten days following delivery of written notice by either Party to the other Party of its intent to terminate if Sidewalk Labs has instituted a Funding Suspension pursuant to Section 9.03 for at least 45 consecutive days that is continuing;

(v) September 30, 2019, or such later date as the Parties may agree, if the MIDP does not have Waterfront Toronto Approval and Sidewalk Approval by such time; and

(vi) December 31, 2019, or such later date as the Parties may agree, if the Principal Implementation Agreements do not have Waterfront Toronto Approval and Sidewalk Approval by such time.

(b) In the event that this Agreement is terminated pursuant to Section 9.01, no reimbursement of any Budget amount shall be payable by Waterfront Toronto to Sidewalk Labs except for an adjustment of Waterfront Toronto Reimbursables as set out in Section 9.03, and Waterfront Toronto shall be entitled to use Site-Specific IP and Co-Created IP, as provided for in Schedule G, and those aspects of the MIDP to which Waterfront Toronto made a contribution.

9.02 **Survival**

Upon the expiration or termination of this Agreement, this Agreement shall forthwith become null and void and of no further force or effect whatsoever, without liability or obligation on the part of any Party; provided, however, that: (i) no such expiration or termination shall relieve any Party of any liability or obligation resulting from or arising out of such Party's breaches of this Agreement prior to such expiration or termination; and (ii) this Article IX (Term), Article VII (Intellectual Property; Privacy & Data Governance), Article X (Confidentiality), Article XIV (General) and, to the extent applicable to such surviving Articles and Schedules, Schedule A (Definitions and Interpretation) shall survive.

9.03 **Unspent Funds**

Sidewalk Labs shall have no further obligations for the expenditure of any such remaining, unspent funds pursuant to the Sidewalk Funding Commitment after the Term. For the avoidance of doubt, any amounts and liabilities due and owing (but not yet paid) at the time of expiration or termination of this Agreement pursuant to binding contractual commitments entered into by Sidewalk Labs prior to the date of expiration or termination and specified in the Budget shall not be treated as remaining, unspent funds, and Sidewalk Labs shall remain liable for payment of the same (subject to the overall Sidewalk Funding Commitment). Sidewalk Labs shall not be liable for payment or reimbursement to Waterfront Toronto or any Person acting for or on behalf of Waterfront Toronto of any amounts incurred or relating to the period after the date of expiration or termination of this Agreement. If Sidewalk Labs reasonably and in good faith determines that the Parties will be unable to obtain Waterfront Toronto Approval or Sidewalk Approval of the MIDP or Principal Implementation Agreements, Sidewalk Labs may, by notice to Waterfront Toronto, suspend its funding obligations under this Agreement, during which time it shall not be obligated to fund any portion of the Sidewalk Funding Commitment (a "**Funding Suspension**"). Waterfront Toronto shall not be obligated to pay or repay any portion of any Second Funding Commitment other than an adjustment to the date of termination or expiration of this Agreement of any overpayment of the Waterfront Toronto Reimbursables.

ARTICLE X
CONFIDENTIALITY

10.01 **Freedom of Information and Confidentiality Policies**

The Freedom of Information and Confidentiality Term attached as Schedule H hereto sets out provisions governing the Parties' rights and obligations with respect to freedom of information and confidentiality.

ARTICLE XI
EXCLUSIVITY

11.01 **Exclusivity**

(a) As part of the consideration of the substantial expenditure of time, effort and expenses to be undertaken by both Waterfront Toronto and Sidewalk Labs and their respective representatives in connection with the Project, Waterfront Toronto and Sidewalk Labs agree with each other that during the period commencing as of the date of this Agreement and ending at the end of the Term, neither Waterfront Toronto nor Sidewalk Labs nor any of their respective controlled affiliates shall initiate, accept, negotiate or otherwise pursue any offers or proposals to engage with any third party for the planning or development of any lands located within the MIDP Site that are not consistent with the Project.

(b) Any discussions between the parties relating to these exclusivity provisions shall be undertaken in a manner consistent with the Collaboration Principles, including the dispute resolution procedures therein as appropriate.

(c) Sidewalk Labs shall notify Waterfront Toronto of any negotiations (arising at such time as discussions reach the point of the execution of binding term sheets and reasonably in advance of any public announcement) regarding any urban development project globally of similar or greater size and/or vision as the Project. For the avoidance of doubt, the existence, status and terms of any such negotiations of which Waterfront Toronto is notified by Sidewalk Labs shall constitute confidential information subject to Schedule H.

ARTICLE XII
ADDITIONAL LANDS

12.01 **Additional Lands**

In the event that either Waterfront Toronto or Sidewalk Labs or any Sidewalk Labs' controlled affiliate acquires or obtains an option to acquire or obtains any interest in any real property (the "**Additional Lands**") located in whole or in part within the MIDP Site or engages in substantial negotiations (arising at such time as discussions reach the point of the execution of binding term sheets and reasonably in advance of any public announcement and not prior thereto) with a third party to acquire or obtain an option to acquire or obtain an interest in any real property located in whole or in part within the MIDP Site, such Party will promptly notify the other Party of such acquisition, option or interest, or substantial negotiations, and any Additional Lands acquired by a Party or in which a Party obtains an option or interest shall be included in the plans included in the MIDP and fall within the MIDP Scope.

ARTICLE XIII
ADMINISTRATION

13.01 **Notices to Parties**

All notices, requests, demands, instructions, certificates, consents and other communications (each being a "**Notice**") required or permitted under this Agreement shall be in writing and shall be served by sending the same by electronic mail or by hand delivery (including courier) addressed as follows:

If to Waterfront Toronto:

Toronto Waterfront Revitalization Corporation
20 Bay Street, Suite 1310
Toronto, Ontario M5J 2N8
Attention: General Counsel
E-mail: IBeverley@waterfrontoronto.ca

with a copy, which shall not constitute notice, to:

McCarthy Tétrault LLP
66 Wellington Street West
Toronto, Ontario M5K 1E6
Attention: Abraham Costin
E-mail: acostin@mccarthy.ca

If to Sidewalk Labs:

c/o Sidewalk Labs LLC
10 Hudson Yards
New York, New York 10001
Attention: General Counsel/Head of Legal
E-mail: legal@sidewalklabs.com

with a copy, which shall not constitute notice, to:

Fried, Frank, Harris, Shriver & Jacobson LLP
One New York Plaza
New York, New York 10004
Attention: Tal Golomb, Esq.
E-mail: Tal.Golomb@friedfrank.com

and

Davies Ward Phillips & Vineberg LLP
155 Wellington Street West
Toronto, Ontario M5V 3J7
Attention: Greg Southam Esq.
E-mail: GSoutham@dwpv.com

13.02 **Change of Address**

Any Party to this Agreement may, from time to time, change any of its contact information set forth in Section 13.01 by prior Notice to the other Party, and such change shall be effective on the Business Day that next follows the recipient Party's receipt of such Notice unless a later effective date is given in such Notice.

13.03 **Deemed Receipt of Notices**

(a) A Notice given by hand delivery shall be deemed to have been received on the day it is delivered. Subject to Section 13.03(b), a Notice given by e-mail shall be deemed to have been received on the day it is transmitted by e-mail.

(b) If any Notice delivered by hand or transmitted by e-mail is so delivered or transmitted, as the case may be, either on a day that is not a Business Day or on a Business Day after 4:00 p.m. (recipient's local time), then such Notice shall be deemed to have been received by such recipient on the next Business Day.

ARTICLE XIV
GENERAL

14.01 **Assignment and Change of Control**

(a) No Party may assign this Agreement or any rights or obligations hereunder without the prior written consent of the other Party; provided, however, that Sidewalk Labs may assign, transfer, subcontract, sub-participate or otherwise dispose of its interest in this Agreement or any rights or obligations hereunder, in whole or in part, to any subsidiary of Sidewalk Labs without the prior written consent of Waterfront Toronto, provided that: (a) such subsidiary is and continues to be controlled by Sidewalk Labs; (b) such subsidiary agrees to be bound by all of the applicable obligations of Sidewalk Labs under this Agreement; and (c) Sidewalk Labs shall not be released from any of such obligations as a result thereof. Sidewalk Labs agrees to provide a list of all such subsidiaries which list will be updated by it to reflect any additional subsidiaries to which it has assigned, transferred, subcontracted, sub-participated or otherwise disposed of its interest, as aforesaid. Subject to the foregoing, this Agreement shall inure to the benefit of, and be binding upon, Waterfront Toronto, Sidewalk Labs and their respective successors and permitted transferees and assigns.

(b) Sidewalk Labs agrees that any Change of Control of Sidewalk Labs will require Waterfront Toronto's consent, not to be unreasonably withheld, provided, for the avoidance of the doubt, that any issuance to employees of non-voting shares shall not constitute a Change of Control requiring Waterfront Toronto's consent, but Sidewalk Labs shall provide Waterfront Toronto prompt notice thereof. "**Change of Control**" shall mean any transfer of a majority (or more) of the voting equity interests in Sidewalk Labs to a third party other than Alphabet Inc. or any of its subsidiaries.

14.02 **RFP Process and Designation**

(a) Waterfront Toronto represents and warrants to Sidewalk Labs that the designation of Sidewalk Labs as the Innovation and Funding Partner under the RFP (the "**RFP Designation**") has been made in accordance with the RFP and that Waterfront Toronto's conduct in connection with the RFP process, including the creation and administration of the RFP and the designation of Sidewalk Labs as the Innovation and Funding Partner, has been in compliance with all applicable Laws and policies applicable to Waterfront Toronto, including those relating to Waterfront Toronto's mandate, procurement and confidentiality.

(b) Sidewalk Labs represents and warrants to Waterfront Toronto that it has not engaged in any improper conduct intended to influence any government officials in connection with the RFP Designation.

14.03 **Waiver**

(a) No waiver made or given by a Party under or in connection with this Agreement shall be binding or effective unless the waiver is in writing, signed by an authorized representative of the Party giving such waiver, and delivered by such Party to the other Party. No waiver made with respect to any such right, power or remedy in one instance will be deemed to be a waiver with respect to any other instance involving the exercise of the right, power or remedy or with respect to any other such right, power or remedy.

(b) Failure by either Party to exercise any of its rights, powers or remedies hereunder or any delay in doing so shall not constitute a waiver of those rights, powers or remedies. The single or partial exercise of a right, power or remedy shall not prevent its subsequent exercise or the exercise of any other right, power or remedy.

(c) No consent or approval contemplated herein or provided by a Party shall constitute a waiver of any requirement herein.

14.04 **Indemnity**

(a) Each Party and, in the case of Sidewalk Labs, its controlled affiliates (the "**Indemnifier**") shall defend, protect, indemnify, and hold harmless the other Parties, including its agents, officers, directors, employees and shareholders (collectively, the "**Indemnified Parties**") harmless against and from any and all injuries, costs, expenses, liabilities, losses, damages, injunctions, suits, actions, fines, penalties, and demands of any kind or nature (including reasonable lawyers' fees in connection therewith) (collectively, "**Claims**") arising out of or relating to any and all third-party Claims in connection with: (i) any intentional misconduct or negligence of the Indemnifier or any Person for whom it is at law responsible, or (ii) any breach or default in the performance of any of the Indemnifier's obligations hereunder, including failure to pay any amounts properly due and owing hereunder.

(b) Notwithstanding the foregoing, the indemnity set out in Section 14.04(a) shall not apply where any Claims arise as a result of the willful misconduct, negligent act or omission or the illegal actions of the Indemnified Party and any Claims for indemnification under the indemnity set out in this Section 14.04 shall be subject to the other terms and conditions of this Section 14.04.

(c) This indemnity shall survive termination or expiration of this Agreement to the extent relating to Claims arising out of, or relating to events that occurred prior to such termination or expiration.

(d) The Indemnified Party shall give prompt written notice to the Indemnifier of any matter that such Indemnified Party determines may give rise to a right of indemnification hereunder including, in the case of a third-party claim, a copy of such claim and, if otherwise, a summary of the relevant facts (the "**Notice of Claim**").

(e) Following receipt by the Indemnifier of a Notice of Claim, the Indemnifier shall be entitled to make such investigation of the claim, loss or costs as the Indemnifier considers necessary or desirable at its sole cost and expense. For the purpose of such investigation, the Indemnified Party shall make available to the Indemnifier all information relied upon by the Indemnified Party to substantiate the claim and the Indemnifier shall be entitled to conduct such tests and investigations as it considers necessary or desirable with respect to such claim.

(f) Within thirty days following receipt by the Indemnifier of a Notice of Claim (or such later time as may be agreed to by both the Indemnifier and the Indemnified Party), the Indemnifier may

(in the name of the Indemnified Party) elect to assume control of and proceed in a diligent manner with the investigation, defense or settlement of the matter or claim in question including, choice of counsel (in which case the Indemnified Party shall not be entitled to be indemnified for the costs of any additional counsel) and other advisors or may require the Indemnified Party to do so on such terms as the Indemnifier deems fit in its sole discretion and at its sole cost and expense. Should the Indemnifier elect to assume control of the matter or claim, then the Indemnifier shall be precluded from denying that such matter or claim is subject to indemnification under this Section 14.04.

(g) The Indemnifier shall, at its discretion, following consultation with the Indemnified Party do such acts and things, conduct such negotiation, take or defend such proceedings and make such settlement as it deems advisable with respect to such claim.

(h) The Indemnified Party shall not settle or compromise any third-party claim or admit liability in respect thereof or disclose the existence of the indemnity in this Section 14.04, other than as may be required in defence of a court action in respect of matters arising out of or relating to this Agreement, except with the prior written consent of the Indemnifier.

(i) The Indemnified Party and the Indemnifier shall cooperate with the other fully in respect of any claim, including providing each other on an ongoing basis with all information that may be relevant to the other's liability hereunder and supplying copies of all relevant documentation promptly as it becomes available and each shall make available such witnesses as are under its control.

(j) Upon receipt by the Indemnified Party of any payment pursuant to the indemnity in this Section 14.04 or upon the determination of any third-party claims subject hereto, the Indemnifier shall be subrogated to all the rights of the Indemnified Party in respect of such third party claim or the matter resulting in such payment. Any payment to an Indemnified Party under this Section 14.04 shall be made, where practically possible, net of any income tax savings and insurance proceeds.

14.05 **Release; No Consequential Damages**

(a) Sidewalk Labs acknowledges that the obligations and duties of Waterfront Toronto set out herein are solely and exclusively the obligations of Waterfront Toronto, and no other Person, including any of the Three Orders of Government, has any duty or obligation either for or on behalf of Waterfront Toronto in connection with its obligations hereunder, and Sidewalk Labs hereby and irrevocably releases the Three Orders of Government from any and all Claims that Sidewalk Labs may have against Waterfront Toronto pursuant to this Agreement, and in respect to such release, acknowledges that the Three Orders of Government are third-party beneficiaries under the terms of this Section 14.05.

(b) Neither Waterfront Toronto nor Sidewalk Labs shall be liable for indirect, incidental or consequential damages suffered by the other, for loss of profit or opportunity, or for punitive damages with respect to any term or the subject matter of this Agreement or in any other way related to this Agreement, even if informed of the possibility thereof in advance. This limitation applies to all causes of action at law or in equity, including breach of contract, breach of warranty, negligence, strict liability, fraud, misrepresentation and other torts.

14.06 **Entire Agreement**

The Parties agree that this Agreement supersedes the terms of the Framework Agreement in its entirety (which is, as of the date hereof upon execution and delivery hereof, of no further force or effect), and except as expressly provided otherwise herein, this Agreement constitutes the entire agreement between Sidewalk Labs and Waterfront Toronto in connection with its subject matter and supersedes all prior

representations, communications, negotiations and understandings, whether oral, written, express or implied, concerning the subject matter of this Agreement. Without limiting the foregoing, Sidewalk Labs agrees that concurrently with the execution of this Agreement it cause Sidewalk Toronto, Limited Partnership to deliver to Waterfront Toronto an acknowledgement that this Agreement supersedes the Framework Agreement in its entirety.

14.07 **Severability**

If any provision of this Agreement shall be declared invalid, unenforceable or illegal by a court of competent jurisdiction, such provision may be severed and such invalidity, unenforceability or illegality shall not prejudice or affect the validity, enforceability and legality of the remaining provisions of this Agreement. If any such provision of this Agreement is invalid, unenforceable or illegal, the Parties shall, acting in good faith, promptly negotiate new provisions to eliminate such invalidity, unenforceability or illegality and to restore this Agreement as near as possible to its original intent and effect.

14.08 **Relationship of the Parties**

Waterfront Toronto and Sidewalk Labs shall each be, and are hereby, independent contractors and nothing herein shall create (nor is this Agreement intended to create) any partnership, agency, employment or joint venture relationship whatsoever. No Party shall act or have the authority or power to act for any other Party or to make any commitment, obligation, representation or warranty on behalf of the other Party as its agent or otherwise.

14.09 **Amendment**

No Amendment of this Agreement shall be effective unless in writing and signed by each of the Parties.

14.10 **No Third-Party Beneficiaries**

Except as set out in Section 14.05, this Agreement is not intended to and shall not confer upon any Person other than the Parties any rights or remedies hereunder.

14.11 **Interpretation**

Without limiting Section 1.03 of Schedule A, the Parties agree that this Agreement is the product of negotiation among sophisticated parties, each of which was or has been given the opportunity to be represented by counsel, and each of which had an opportunity to participate in, and did participate in, the negotiation of the terms hereof. Accordingly, the Parties acknowledge that ambiguities in this Agreement, if any, shall not be construed strictly or in favour of or against any Party, but rather shall be given a fair and reasonable construction. Capitalized terms used but not otherwise defined herein shall have the meanings ascribed to such terms as set forth on Schedule A, which also includes provisions concerning the interpretation of this Agreement.

14.12 **Counterparts**

This Agreement may be executed in counterparts, each of which shall be deemed an original and which, taken together, shall constitute one and the same instrument. This Agreement may be delivered by electronic transmission of a .pdf signature, and the Parties hereby adopt any signature received in pdf as original signatures of the transmitting Party.

14.13 **Governing Law; Jurisdiction**

This Agreement will be governed by, and construed in accordance with, the laws of the Province of Ontario and all federal laws applicable therein, regardless of the conflicts of laws principles thereof. Subject to the Collaboration Principles, each of the Parties agrees that any disputes arising between the parties in relation to this Agreement will be brought exclusively in the courts of the Province of Ontario and all courts competent to hear appeals therefrom. The Parties hereby irrevocably submit to the exclusive jurisdiction of such courts.

14.14 **Affiliates**

Sidewalk Labs has and may in the future have controlled affiliates working on aspects of the MIDP and agrees to cause such controlled affiliates to comply with this Agreement Sidewalk Labs Employees, LLC or Sidewalk Labs Employees Ltd. are deemed to be controlled affiliates.

(the remainder of this page is intentionally blank)

IN WITNESS WHEREOF this Agreement has been executed by the Parties as of the date first above written.

TORONTO WATERFRONT REVITALIZATION CORPORATION

Per: _____
Name: Helen Burstyn
Title: Chair, Board of Directors

Per: _____
Name: Michael Nobrega
Title: CEO (Acting)

SIDEWALK LABS LLC

Per: _____
Name: Daniel L. Doctoroff
Title: CEO

APPROVED AS TO FORM

_____
Ian Beverley
General Counsel

[Signature Page to Plan Development Agreement]

SCHEDULE A
DEFINITIONS AND INTERPRETATION

1.01 **Definitions**

The following terms and expressions used herein shall have the following meanings:

(a) "**Act**" has the meaning ascribed thereto in Section 1.01(a).

(b) "**Additional Approvals**" has the meaning ascribed thereto in Section 3.01(a).

(c) "**Additional Lands**" has the meaning ascribed thereto in Section 12.01.

(d) "**affiliate**" means, in respect to any Person, another Person that controls, is controlled by or is under common control with such Person.

(e) "**Agreement**" means this Plan Development Agreement including all Schedules.

(f) "**Budget**" has the meaning ascribed thereto in Section 5.01(a).

(g) "**Business and Implementation Plan(s)**" or "**BIP(s)**" has the meaning ascribed thereto in Section 6.01(a).

(h) "**Business Day**" means any day other than a Saturday, Sunday or statutory holiday in the Province of Ontario or the City of New York.

(i) "**Claims**" has the meaning ascribed thereto in Section 14.02(a).

(j) "**Co-Created IP**" has the meaning ascribed thereto in Schedule G.

(k) "**Collaboration Principles**" has the meaning ascribed thereto in Section 6.04(a).

(l) "**competitive process**" has the meaning ascribed thereto in Schedule D.

(m) "**Contract**" means any agreement, contract, deed, lease, sub-lease, request for proposals, bid, memorandum of understanding, letter of intent or other agreement (in each case, whether written or oral).

(n) "**Contribution Agreement**" has the meaning ascribed in Section 4.01(a)(i).

(o) "**control**," "**controlled by**," and "**under common control with**" means (i) with respect to any Person, the ability to direct the management of such Person, whether by contract, voting rights or otherwise; provided that control shall not be deemed absent solely because another member, partner or other Person shall have a veto or consent with respect to major decisions but shall not be deemed vested because such other member, partner or other Person has been granted veto or consent rights (and a Person having a veto or consent right shall not in and of itself be construed to mean such Person has control, and, (ii) with respect to any real property or real property interest, the ability to cause the acquisition or disposition in relation to such real property. As used herein, the terms "control," "controlled by" and "under common control with" and words of similar import shall be construed to mean directly or indirectly.

(p) "**CreateTO**" means CreateTO, the real estate agency of the City of Toronto launched on January 1, 2018 (which operated under the interim name Toronto Realty Agency), and which includes and joins together the Toronto Port Lands Company ("**TPLC**") (formerly City of Toronto Economic Development Corporation ("**TEDCO**")) and Build Toronto.

(q) "**Detailed Budget**" has the meaning ascribed thereto in Section 5.01(c).

(r) "**Designated Waterfront Area**" has the meaning ascribed to it in the Act, as further described in Schedule E.

(s) "**Digital Governance Framework Principles**" means the digital governance framework principles attached hereto as Schedule I.

(t) "**Dispute**" has the meaning ascribed thereto in Schedule F.

(u) "**Enforcement Exceptions**" has the meaning ascribed thereto in Section 8.01(c).

(v) "**FIPPA**" means the *Freedom of Information and Protection of Privacy Act* (Ontario) or a similar freedom of information law.

(w) "**First Contribution Agreement**" has the meaning ascribed thereto in Section 4.01(a)(i).

(x) "**First Funding Commitment**" has the meaning ascribed thereto in Section 5.02(a).

(y) "**FOI Policy**" has the meaning ascribed thereto in Schedule H.

(z) "**Framework Agreement**" has the meaning ascribed thereto in the Recitals.

(aa) "**Funding Suspension**" has the meaning ascribed thereto in Section 9.03.

(bb) "**Future Implementation Agreements**" has the meaning ascribed thereto in Section 2.01(b).

(cc) "**Governmental Authority**" means any federal, provincial or municipal government, parliament or legislature, or any regulatory authority, agency, ministry, department, commission or board or other representative thereof, or any political subdivision thereof, or any court or (without limiting the foregoing) any other law-, regulation- or rule-making entity, in each case, having jurisdiction over the relevant circumstances, or any Person acting under the authority of any of the foregoing (including any arbitrator).

(dd) "**Guiding Digital Design Principles**" has the meaning ascribed thereto in Schedule I.

(ee) "**IGSC**" has the meaning ascribed thereto in Schedule J.

(ff) "**Implementation Agreements**" has the meaning ascribed thereto in Section 2.01(b).

(gg) "**Indemnified Party**" has the meaning ascribed thereto in Section 14.04(a).

(hh) "**Indemnifier**" has the meaning ascribed thereto in Section 14.04(a).

(ii) "**Initial Plan Milestones**" has the meaning ascribed thereto in Section 4.01(a).

(jj) "**Intellectual Property**" or "**IP**" has the meaning ascribed thereto in Schedule G.

(kk) "**Key Contracts**" means, in each case, as amended or supplemented from time to time, (i) the MOU, (ii) the Contribution Agreement, and (iii) the Communications Network Services Agreement, dated as of May 2, 2011 and as amended, originally between Waterfront Toronto, Beanfield Technologies Inc. and 2279745 Ontario Inc.

(ll) "**Law**" means:

(i) any statute, law or proclamation or any delegated or subordinate legislation, including regulations and municipal bylaws;

(ii) any lawful requirement of a Governmental Authority (other than Waterfront Toronto); and

(iii) common law, including any judgment of a relevant court of law, board, arbitrator or administrative agency of competent jurisdiction that is binding and enforceable.

(mm) "**License**" has the meaning ascribed thereto in Schedule G.

(nn) "**Master Innovation and Development Plan**" **or** "**MIDP**" has the meaning ascribed thereto in the Recitals.

(oo) "**MIDP Materials**" has the meaning ascribed thereto in Section 6.02(b).

(pp) "**MIDP Scope**" means the outline setting forth the anticipated scope of the MIDP attached as Schedule B hereto.

(qq) "**MIDP Site**" means the Designated Waterfront Area, as further described in Schedule E hereto.

(rr) "**MIDP Targets**" has the meaning ascribed thereto in Schedule B.

(ss) "**MOU**" means the Memorandum of Understanding, dated as of March 31, 2006, by and among Waterfront Toronto, the City of Toronto and TEDCO (which later became TPLC and then became part of CreateTO), as it may be amended or supplemented by Waterfront Toronto in accordance with the terms of this Agreement.

(tt) "**Non-MIDP Site IP**" has the meaning ascribed thereto in Schedule G.

(uu) "**Notice**" has the meaning ascribed thereto in Section 13.01.

(vv) "**Notice of Claim**" has the meaning ascribed thereto in Section 14.04(d).

(ww) "**Panel**" has the meaning ascribed thereto in Schedule I.

(xx) "**Party**" means Sidewalk Labs or Waterfront Toronto and each of their respective successors and permitted assigns, and "**Parties**" means all of the foregoing.

(yy) "**Person**" means an individual, a partnership, a corporation, a trust, an unincorporated organization, a government or any department or agency thereof and the heirs, executors, administrators or other legal representatives of an individual.

(zz) "**Pilots**" has the meaning ascribed thereto in Schedule G.

(aaa) "**Planning Materials**" has the meaning ascribed thereto in Schedule G.

(bbb) "**Planning Initiatives**" means all actions, plans, studies, environmental assessments, surveys, memoranda of understanding, reports (including City Staff reports and recommendations therein and attachments thereto), term sheets, frameworks, Contracts (including contribution agreements, delivery agreements and, in each case, any statements of work thereunder or schedules or exhibits thereto) and other agreements or arrangements (whether written or oral, binding or non-binding, contingent or non-contingent) and similar initiatives prepared by or for, recommended to or by, reviewed by, submitted to, adopted by and/or approved by Governmental Authorities either (i) concerning the planning for, development of, ownership of, control of and/or use of any relevant lands located within the MIDP Site, or any portion thereof or assets thereon; or (ii) that could reasonably be expected to have an effect on the Project. By way of example (and without limitation to the scope of such term), the Planning Initiatives shall include the Port Lands Planning Framework, the Villiers Island Precinct Plan, modifications and/or amendments to the City of Toronto Official Plan and Central Waterfront Secondary Plan, the Port Lands and South of Eastern Transportation and Servicing Master Plan, the MOU and any other new or modified memoranda of understanding among the City of Toronto, CreateTO and Waterfront Toronto, the Contribution Agreement and all Port Lands Flood Protection and Enabling Infrastructure materials.

(ccc) "**GR/PR Principles**" has the meaning ascribed thereto in Section 6.03(a).

(ddd) "**Principal Implementation Agreements**" has the meaning ascribed thereto in Section 2.01(a).

(eee) "**Procurement Principles**" has the meaning ascribed thereto in Schedule D.

(fff) "**Products and Services**" has the meaning ascribed thereto in Schedule G.

(ggg) "**Program**" has the meaning ascribed thereto in Schedule C.

(hhh) **"Project"** means the creation of the MIDP and the Principal Implementation Agreements, and subject to the approvals herein contained, the implementation thereof.

(iii) "**Project Management Committee**" has the meaning ascribed to it in Schedule F.

(jjj) "**Project Steering Committee**" has the meaning ascribed to it in Schedule F.

(kkk) "**Purposeful Solutions**" has the meaning ascribed thereto in Schedule D.

(lll) "**Quayside Parcel**" means the approximately 12 acres of land identified as the "Quayside Parcel" on Schedule E, inclusive of the water parcel commonly known as Parliament Slip

and any developable lands therein created by any roads closed or realigned or by any water parcels being filled.

(mmm) "**Quayside WT**" means the portions of the Quayside Parcel owned by Waterfront Toronto.

(nnn) "**Relevant Contract**" means any Contract, including all Key Contracts, whether in effect on the date hereof or whether becoming in effect prior to the expiration or termination of this Agreement, (i) to which Waterfront Toronto is a party or to which it or its assets or properties within the MIDP Site are bound or affected or (ii) relating to any portion of the MIDP Site (or assets thereon) and of which Waterfront Toronto is aware (other than as a result of publicly available information), in each case, that would materially affect the plans, ideas or other concepts intended to be included in the MIDP and/or relates to the planning, ownership, control, use, development or provision of services on any relevant lands located within the MIDP Site.

(ooo) "**RFP**" has the meaning ascribed thereto in Section 1.04(a).

(ppp) "**RFP Designation**" has the meaning ascribed thereto in Section 14.02(a).

(qqq) "**RFP Submission Materials**" means the Initial Submission for the RFP submitted by Sidewalk Labs LLC dated April 21, 2017, including appendices and materials submitted therewith, and the Best and Final Offer submission for the RFP submitted by Sidewalk Labs LLC dated August 2017, including appendices and materials submitted therewith.

(rrr) "**Second Contribution Agreement**" has the meaning ascribed thereto in Section 4.01(a)(i).

(sss) "**Second Funding Commitment**" has the meaning ascribed thereto in Section 5.02(b).

(ttt) "**Sidewalk Approval**" has the meaning ascribed thereto in Section 3.01(a).

(uuu) "**Sidewalk Confidential Information**" has the meaning ascribed thereto in Schedule H.

(vvv) "**Sidewalk Funding Commitment**" has the meaning ascribed thereto in Section 5.02(b).

(www) "**Sidewalk Intellectual Property**" has the meaning ascribed thereto in Schedule G.

(xxx) "**Sidewalk Team**" has the meaning ascribed thereto in Schedule F.

(yyy) "**Site-Specific IP**" has the meaning ascribed thereto in Schedule G.

(zzz) "**Term**" has the meaning ascribed thereto in Section 9.01(a).

(aaaa) "**Testbed**" has the meaning ascribed thereto in Schedule G.

(bbbb) "**Three Orders of Government**" means the federal government of Canada, the provincial government of Ontario and the municipal government of the City of Toronto.

(cccc) "**Unique Purposeful Solution**" has the meaning ascribed thereto in Schedule D.

(dddd) "**Waterfront Toronto Design Review Panel"** means the advisory panel established by Waterfront Toronto to provide peer review and advice, as constituted from time to time.

(eeee) "**Waterfront Toronto Approval**" has the meaning ascribed thereto in Section 3.01(a).

(ffff) "**Waterfront Toronto Reimbursables**" has the meaning ascribed thereto in Section 5.01(b).

(gggg) "**Waterfront Toronto Intellectual Property**" has the meaning ascribed thereto in Schedule G.

(hhhh) "**WT Team**" has the meaning ascribed thereto in Schedule F.

1.02 **Schedules**

This Agreement is comprised of this executed agreement and the following schedules, all of which are hereby incorporated by reference into and form part of this Agreement:

Schedule A	Definitions and Interpretation
Schedule B	MIDP Scope
Schedule C	Budget
Schedule D	Procurement Principles
Schedule E	MIDP Site
Schedule F	Collaboration Principles
Schedule G	Intellectual Property Terms
Schedule H	Freedom of Information and Confidentiality Terms
Schedule I	Digital Governance Framework Principles
Schedule J	Communications and Government Relations Principles

1.03 **No Presumption**

Each of the Parties has participated in the drafting and negotiation of this Agreement. If an ambiguity or question of intent or interpretation arises, this Agreement must be construed as if it is drafted by all the Parties, and no presumption or burden of proof shall arise favoring or disfavoring any Party by virtue of authorship of any of the provisions of this Agreement.

1.04 **Interpretation**

Whenever the words "include," "includes" or "including" are used in this Agreement, they shall be deemed to be followed by the words "without limitation." The words "hereof," "herein" and "hereunder" and words of similar import when used in this Agreement shall refer to this Agreement as a whole and not to any particular provision of this Agreement. All terms defined in this Agreement shall have the defined meanings when used in any certificate or other document made or delivered pursuant hereto unless

otherwise defined therein. References to a Person are to such Person and its successors, permitted assigns and heirs, executors and administrators. The definitions contained in this Agreement are applicable to the singular as well as the plural forms of such terms and to the masculine as well as to the feminine and neuter genders of such terms.

SCHEDULE B
MIDP SCOPE

Capitalized terms used but not otherwise defined in this MIDP Scope shall have the meanings ascribed to such terms in the Plan Development Agreement.

1.01 **Purpose of the MIDP**

(a) In developing the MIDP, the Parties wish to create a plan for the development of a place that achieves the shared objectives of Waterfront Toronto and Sidewalk Labs, including to (collectively, the "**MIDP Targets**"):

(i) Establish a complete community that improves quality of life and increases economic opportunity for a diverse population of residents, workers, and visitors;

(ii) Create a destination for people, companies, startups, and local organizations to advance solutions to the challenges facing cities, such as:

- Jobs and Economic Opportunity
- Climate Change
- Affordability
- Transportation, Mobility, and Congestion
- Inclusivity and Diversity

(iii) Make Toronto a global hub for urban innovation with a specific focus to localize and maximize the economic development benefits associated with this objective;

(iv) Demonstrate how the thoughtful infusion of technology into best-in-class urban design can create communities that are better able to serve the needs of citizens;

(v) Serve as a model for climate-positive sustainable neighbourhoods throughout Toronto and cities around the world;

(vi) Create planning targets (massing, density, phasing and zoning) that reflect sound planning principles;

(vii) Create a financial plan and economic targets that set minimum expectations of land value and rates of return that work at different scales; and

(viii) Establish performance measures that if met justify replication of the development and innovation plan.

1.02 **Creating the MIDP**

To create a plan that meets the MIDP Targets, the Parties have established multiple working groups and "Pillars," each with a focus on one or more of the MIDP Targets. Value will be created through an integrated, synergistic approach between the working groups as the Pillars are developed. The Parties will modify the scope or focus of the Pillars (and/or add or remove Pillars) as needed to achieve their shared goals. Each Pillar as of the date hereof is summarized below:

Pillar	Pillar/Working Group Goals and Subject Matter
1. Mobility	Deliver a safer mobility system that is truly competitive with the private automobile through approaches such as prioritizing pedestrian, cycling, and transit infrastructure; designing people-first streets that prioritize pedestrian safety and accessibility; encouraging shared new mobility options such as self-driving electric vehicles that reduce the need for car-ownership and street space devoted to parking and cars; and using real-time detection to optimize street space, dynamically allocate the roadway network and improve safety.
2. Public Realm	Deliver an enhanced public realm that is more usable, gets people outdoors more of the time, and is personalizable for a diverse community, by enabling the community to program the public realm in a way that responds to its needs; creating adaptable streets that can be quickly turned into comfortable pedestrian space; expanding the public realm into non-traditional spaces; creating an outdoor comfort system that mitigates the impact of wind, snow, and sun; and enabling real time management, maintenance and adaptation.
3. Buildings	Create new types of flexible and adaptable buildings that reduce costs and increase efficiency, sustainability, adaptability and affordability while still emphasizing architectural and design excellence.
4. Community & City Services	Foster a close-knit community that connects people to each other and to their environment using digital tools that enable a seamless interface between residents and service delivery, and empower trusted community providers to deliver more personalized services using secure data integrations and co-location.
5. Sustainability	Set a new standard for urban sustainability and a replicable path to climate-positive communities through approaches such as the reduction of building energy use via design and data-driven energy management, the recovery and reuse of waste energy, the generation of onsite renewable energy and transformation of organic waste into energy, active waste and water management, and an adaptable utilities network.
6. Digital Platform	Approach digital infrastructure in a holistic way and design it into the physical environment from the start, ensure adaptability over time, and enable urban data to be unified in a single place and make it open for anyone to use — including researchers, startups, government agencies, civic organizations, and residents — while setting a new standard for responsible data use that protects privacy.
8. Privacy & Data Governance	Create a responsible data use framework that sets a global standard by establishing consistent, scalable, state-of-the-art policies and processes around privacy, data governance, access to data, data ownership and stewardship, information and data security that are consistent with local values and priorities.
9. Pilots/Early Actions	Run technology pilots and create prototypes in Toronto prior to approval of the MIDP that test pillar hypotheses and advance the collective long-term vision of Waterfront Toronto and Sidewalk Labs.
10. Housing Affordability	Develop a toolkit to serve as a global example for the creation of affordable, diverse, mixed income, and multigenerational communities, composed of innovative programs, policies, business models, and existing programs that make housing more available and affordable for all Torontonians, and over time utilize pillar driven innovation to fundamentally lower the cost to deliver and occupy housing.
11. Economic Development & Urban Innovation Institute	Foster economic development, job creation, future skills preparation and generate prosperity by catalyzing a world leading cluster focused on urban innovation; build on the emerging economic clusters, job creators and entrepreneurial and commercial communities on the waterfront and across Toronto and Canada; create

	opportunities for entrepreneurial companies developing new technologies consistent with delivering the goals and objectives of the Project; and establish anchor drivers including the Google Canadian headquarters and an Urban Innovation Institute on the waterfront.
12. Development & Planning	Incorporate the physical manifestations of Pillar initiatives into a holistic and integrated planning and development process, and create strategies around project phasing, occupancy, statutory and regulatory matters, and implementation.

1.03 **Planning At Scale**

The MIDP will include both plans for the Quayside Parcel and plans at scale, including for the MIDP Site as required by the business analysis. The Parties acknowledge that the plans in the MIDP may explore lands not owned or controlled by the Parties.

Any proposed options at scale shall be subject to and closely tied to the achievement of the MIDP Targets and supported by robust business planning and financial analysis, taking into account the Parties' shared programmatic goals and the MIDP Targets, matters of financing and capital formation, anticipated absorption and economic impact, including estimates for job and economic growth, and through the development of business plans and financial models subject to various assumptions (including with respect to potential revenue streams and estimated costs, including of land) and showing various sensitivities and comparisons (including comparing to a baseline "market" / traditional developer scenario). To the extent these analyses demonstrate the need for scale the Parties will incorporate into the MIDP a set of proposed phases and sequencing to achieve such scale and, subject to obtaining necessary approvals, implement such MIDP.

Any implementation of the MIDP will be subject to Waterfront Toronto Approval and Sidewalk Approval, as well as various other conditions, including the receipt of any necessary governmental approvals and clearances and the receipt of any necessary approvals, agreements or consents with landowners or the other third parties.

The extent to and the manner in which successful solutions, processes and partnerships are carried forward into subsequent developments could be affected by requirements of the City of Toronto or other authorities or Waterfront Toronto becoming subject after the Effective Date to applicable procurement Laws.

1.04 **Regulatory Framework**

The Parties acknowledge that the MIDP will address existing applicable laws and the existing policy framework and will note places in which its plans may require revision of, or other approvals under, such existing applicable laws and existing policy framework, in which case the implementation of any such plans will be subject to the relevant Governmental Authorities making or granting such revision or approval. The MIDP will be developed through a process of co-creation and collaboration between the Parties, informed by a robust public engagement process and close collaboration with the City of Toronto and other governmental agencies and stakeholders.

SCHEDULE C
BUDGET

Capitalized terms used but not otherwise defined in this Budget shall have the meanings ascribed to such terms in the Plan Development Agreement.

Expense	Estimated Amount
(i) Design, Planning, Engineering & Technical Services: The creation of a comprehensive MIDP will require integrating all pillar strategies and other critical work streams into an overall program (the "**Program**"), inclusive of planning, engineering and design, the fidelity of which will vary based on scale. The Budget will account for all services associated with developing the Program and testing the physical manifestation of specific innovations. Costs include planning and preliminary design/engineering and technical feasibility analyses; consulting support to further pillar strategies; and further developing certain specific innovations or systems.	US$[21,570,000.00]
(ii) Legal, Regulatory & Policy: Refining Waterfront Toronto and Sidewalk Labs' joint vision for the MIDP and enabling a path to implementation will require a comprehensive understanding of the legal and policy implications of all pillar strategies and the development of a regulatory pathway including government participation for approval. Work in this category will facilitate the ability of Waterfront Toronto and Sidewalk Labs to develop a leading world view on data privacy and data governance, support membership and conference participation with industry groups, engage with local policy advisors, and offer ongoing legal counsel to inform the development for all pillar strategies and major work streams.	US$[2,664,000.00]
(iii) Waterfront Toronto / Waterfront Toronto Reimbursables: A portion of the Budget will be dedicated to the costs (subject to Sidewalk's confirmation of actual incurrence of such costs) of Waterfront Toronto resourcing, including compensation for new and existing Waterfront Toronto staff and supporting staff contributing to the Project, including community consultation expenses pursuant to the GR/PR Principles and related expenses for capacity building, travel expenses for staff, and shared occupancy of office space at 20 Bay Street, subject to the quarterly cap set forth to the right.	US$[4,468,000.00] (US$[1,117,000.00] per quarter)
(iv) Pilots: Prior to the completion and approval of the MIDP, Waterfront Toronto and Sidewalk Labs will use early actions/pilots to aim to familiarize Torontonians with Waterfront Toronto and Sidewalk Labs, build its local	US$[2,483,000.00]

Expense	Estimated Amount
presence, invite public engagement with the ideas proposed in the MIDP and further its technology development capability as well.	
(v) Financial & Business Planning: Creating a MIDP for a financially viable Project will necessitate a number of expenses related to financial and business planning, including support for transaction diligence (tax and legal), appraisal and valuation advice, program development, financial modeling, market valuation and economic impact analyses as well as the development of financing and equity strategies and regulatory and compliance support.	US$[3,103,000.00]
(vi) Facilities & Operations Ongoing operational support for Waterfront Toronto and Sidewalk Labs' specific to the creation of the MIDP will also be required, including travel and expenses, as well as costs related to setting up the necessary operations to support Waterfront Toronto and Sidewalk Labs staff in Canada—from costs associated with tax equalization, to the secondment process, to an HR/benefits system for Toronto-based employees.	US$[4,525,000.00]
(vii) Communications, External Affairs & Engagement: A robust stakeholder engagement strategy that demonstrates Waterfront Toronto and Sidewalk Labs' joint vision and invites public and private stakeholders to engage with and contribute to the planning process is critical to the success of the Project. The Budget will seek to support four core components: • *Stakeholder Engagement:* Stakeholder engagement, including private sector engagement, will seek to ensure support for the MIDP among key constituents in Toronto. Associated costs will support the formation of advisory boards, consultant support for communications, and all related marketing and partnership events. • *Public Engagement:* A comprehensive public engagement plan will invite Torontonians to provide feedback throughout the course of the creation of the MIDP and engage with Waterfront Toronto and Sidewalk Labs. Expenses will support a series of public events and programs, as well as the associated materials and promotion for each, including public talks, design charrettes, and the fellows program, among many other engagement activities. • *MIDP Production:* Completion and delivery of the MIDP will require a budget allocated to the production of the MIDP document(s) as well as the MIDP digital experience, the public launch of the MIDP, and associated events, videos	US$[11,187,000.00]

Expense	Estimated Amount
and exhibits to bring ideas articulated in the MIDP to life. • *307 Lakeshore Boulevard East*: 307 LSBE will be used to prototype the integration of Waterfront Toronto and Sidewalk Labs ideas at human scale while engaging the public in planning efforts. Costs associated with the development and delivery of the multi-purpose site include: ▪ *Prototyping:* Expenses to improve ideas through integrated prototyping. ▪ *Programming:* Costs associated with programming. ▪ *Occupancy & Operating:* Ongoing costs associated with developing and delivering 307 Lakeshore Boulevard East for the purposes above, including capex, leasing, and interim office space leasing.	

SCHEDULE D
PROCUREMENT PRINCIPLES

Capitalized terms used but not otherwise defined in these procurement principles ("**Procurement Principles**") shall have the meanings given to them in the Plan Development Agreement.

1.01 **Procurement Pre-Implementation Agreements**

Prior to execution of the Implementation Agreements, Sidewalk Labs will conduct any procurement using the Sidewalk Funding Commitment in accordance with its bona fide internal procurement policies, which may provide for competitive procurement (including an invitational process soliciting bids from a set of qualified bidders) in appropriate circumstances and may provide for sole sourcing in appropriate circumstances. Sidewalk Labs will provide the Project Management Committee with appropriate updates with respect to and visibility into procurement using the Sidewalk Funding Commitment.

1.02 **Procurement Post-Implementation Agreements**

The Parties expect procurement related to the Project to help stimulate the economy and business growth in Toronto, Ontario, and Canada and deliver key economic and social benefits, including to enable Toronto to compete effectively with other top-tier global cities for investment, jobs and talent and facilitate an innovation ecosystem to help create opportunities for job creation, entrepreneurial enterprise and the growth of established industries.

With respect to procurement following execution of the Implementation Agreements, the Parties will include in such Implementation Agreements agreed fair and arms'-length procurement standards.

Such procurement standards to be incorporated into the Implementation Agreements will seek to balance – in the public interest – the use of market-based sourcing, on the one hand, and the direct facilitation of Purposeful Solutions for innovation, on the other hand, and will be informed by the following principles:

- *Consultation* –Sidewalk Labs and Waterfront Toronto will consult with one another on the strategies and processes related to procurement by Sidewalk Labs in connection with the Project;

- *Flexibility* – Sidewalk Labs' procurement strategies and processes with respect to the Project will provide it with sufficient flexibility to conduct its operations, fulfill its obligations and attract third-party capital investment, if and as desired;

- *Value* – Sidewalk Labs' procurement strategies and processes with respect to the Project will seek to optimize the terms (i.e., value for money) on which it procures goods and services;

- *Fairness* – Sidewalk Labs' procurement strategies and processes with respect to the Project will be developed and conducted in a fair and unbiased manner; and

- *Compliance* – Sidewalk Labs will comply with all applicable procurement regulations and laws.

As contemplated by A1.c of the RFP and RFP Submission Materials ,the MIDP will identify technological innovations that at the time of their development can objectively and impartially be shown to have no suitable alternatives available in the market ("**Purposeful Solutions**"), and the Implementation Agreements will generally contemplate competitive procurement processes, with limited exceptions

allowing for Sidewalk Labs or its affiliates to provide Purposeful Solutions, but only on a fair and demonstrably arms'-length basis.

SCHEDULE E
MIDP SITE



SCHEDULE F
COLLABORATION PRINCIPLES

These Collaboration Principles are the principles related to day-to-day collaboration and oversight between Waterfront Toronto and Sidewalk Labs in developing the MIDP and the Principal Implementation Agreements. The Parties will work together to continue to refine the working relationship of the Parties throughout the evolution of the Project and the appropriate processes, approvals, involvement, visibility, consultations, oversight, rights, responsibilities and roles throughout. Capitalized terms used but not otherwise defined herein shall have the meanings ascribed to such terms in the Plan Development Agreement.

1.01 **Day-to-Day Collaboration**

(a) Planning and development of the MIDP and the Principal Implementation Agreements will be managed through a jointly formed committee (the "**Project Management Committee**") consisting of one senior project management representative of each of Waterfront Toronto and Sidewalk Labs.

(b) Under the day-to-day direction of the Project Management Committee, Waterfront Toronto and Sidewalk Labs will:

(i) work as an integrated team, with the key employees of Waterfront Toronto engaged in the creation of the MIDP (the "**WT Team**") working together with the key employees of Sidewalk Labs working on the creation of the MIDP (the "**Sidewalk Team**");

(ii) work to capitalize on their respective skills and will agree on the members of the WT Team and Sidewalk Team;

(iii) establish and manage working groups and "Pillars" as set out in the MIDP Scope;

(iv) ensure that each major functional working group will include at least one representative or their approved designate from each organization;

(v) develop an open approach to collaborative working, with the Parties seeking to share and discuss work with sufficient opportunity for receiving and incorporating feedback; and

(vi) develop and operate through specific work programs, milestones and reporting formats for the creation and formation of the MIDP, including performance management, will be devised in a manner acceptable to both Waterfront Toronto and Sidewalk Labs.

1.02 **Oversight**

(a) Waterfront Toronto and Sidewalk Labs will form an oversight committee (the "**Project Steering Committee**") comprising an equal number of senior representatives of both parties including their respective CEOs. The Project Steering Committee will set strategy and high-level shared objectives and will be the formal decision-making venue for the partnership of the Parties. The Project Steering Committee will meet regularly (and, in any event, not less than monthly), to coordinate the Parties' respective activities

regarding the Project and the Parties' respective obligations and activities under the Plan Development Agreement.

(b) Reporting to the Project Steering Committee, the Project Management Committee will meet regularly (and not less than twice monthly) to manage the MIDP planning and development, agree on and direct public and government relations matters, review updates on expenditures of the Second Funding Commitment in accordance with the Detailed Budget and approve any deviations of more than CAN$2,000,000 to any line item of the Detailed Budget.

1.03 **Dispute Resolution Processes**

(a) The Parties recognize that disagreements or differences (collectively, a "**Dispute**") between the Parties may arise from time to time under this Agreement and desire to establish procedures to guide the resolution of such Disputes in an expedient and friendly manner without resort to arbitration, litigation or other formal proceedings.

(b) If a Dispute arises between the Parties under the Plan Development Agreement, and the Parties do not resolve some or all of the Dispute through informal discussions among the relevant representatives involved, then: (a) either Waterfront Toronto may give Sidewalk Labs a written notice, or Sidewalk Labs may give Waterfront Toronto a written notice, as applicable, requesting initiation of these dispute resolution procedures with respect to such particular Dispute; (b) promptly following such notice, the Project Steering Committee will meet to discuss and attempt to resolve the Dispute; (c) if the Dispute is not adequately addressed within 20 days of such notice by the Project Steering Committee, the respective CEOs of Sidewalk and Waterfront Toronto agree to meet to discuss and attempt to resolve the Dispute, including in person if necessary; (d) if the Dispute is not adequately addressed within 20 days of discussion by the CEOs, the parties shall, within 10 business days, mutually agree on a third-party mediator, and discuss and attempt to resolve such Dispute through mediation; and (e) if the Dispute is not adequately addressed after one mediation session, either Party may provide written notice to the other party of its intent to terminate the Plan Development Agreement.

(c) All information exchanged during such discussions and negotiations regarding a Dispute following a written notice requesting initiation of these dispute resolution procedures with respect to such Dispute will be regarded as "without prejudice" communications for the purpose of any settlement negotiations in connection with such Dispute and will be treated as confidential information subject to the terms of Article IX of the Plan Development Agreement. However, evidence that is independently admissible or discoverable shall not be rendered inadmissible or non-discoverable by virtue of its use during such discussions and negotiations.

SCHEDULE G
INTELLECTUAL PROPERTY TERMS

Capitalized terms used but not otherwise defined in this Schedule G shall have the meanings ascribed to them in the Plan Development Agreement.

1. Principles and Process

In the MIDP, and the related Implementation Agreements, the Parties will address their rights and responsibilities around various items of intellectual property as generally described in Section 2 below ("**Intellectual Property**" or "**IP**") that will be relevant to the MIDP and any subsequent activity on the MIDP Site. The MIDP and/or related Implementation Agreements will also address the reasonable issues and concerns of various third-party stakeholders in the MIDP Site ecosystem, in order to ensure that the principles surrounding IP help to facilitate the various goals and objectives that the Parties have for the community. This Schedule G sets out some general principles that will be used to approach those IP-related questions. As part of the MIDP process, the Implementation Agreements will contain definitive provisions dealing with these IP questions.

2. Types of Intellectual Property

Several types of IP are relevant to the relationship between the Parties. There will be copyright material, in the form of written and other creative work product, including the MIDP itself, as well as other planning-related material, such as design documents, studies, and the like (broadly speaking, the MIDP and related materials will comprise (i) urban planning-related materials ("**Planning Materials**"), and (ii) high level specifications for certain products and services that could be used at the MIDP Site ("**Products and Services**")). A variety of Products and Services can be envisaged, including those directed to end users and consumers, and those that are more like "enabler" technologies, which then facilitate other services – different types of IP might therefore direct different principles on ownership, use and compensation. Other types of Intellectual Property may arise in the course of the MIDP, including data. There may be some inventions originated by either Party, or by the Parties acting jointly, that could be subject to patent protection. Also, certain new brands may be designed by the Parties, again either by one or other Party, or both Parties acting jointly, that may be subject to trademark protection.

3. Multiple and Diverse IP-Related Value Drivers

The Parties acknowledge that each Party may add value to an element of IP other than through participating in its authoring in the traditional manner. For example, while Sidewalk Labs may bring value by bringing its experiences and learnings accumulated in other markets outside of the Greater Toronto Area, Waterfront Toronto may bring value by providing, among other things, a meaningful test bed and product/service trial venue at the MIDP Site ("**Testbed**"), or by allowing developers of Products and Services to have responsible access to datasets necessary or useful to the design or prototyping of Products and Services. Any agreements of the Parties with respect thereto will be included in the Implementation Agreements.

4. Mutual Notification of Intellectual Property

The Parties will be open with each other about IP-related matters. At least once each month, or at such intervals as otherwise may be agreed between the Parties, the Parties will meet to disclose to each other the IP related to MIDP Site, or that could become part of Products or Services, any Site-Specific IP or joint Co-Created IP or the IP they are planning to commence work on in the next three months. In these meetings, the Parties will jointly determine and document what category of IP each development will

come under, for purposes of Sections 5, 6 and 7 below and schedule the IP accordingly. Communications will be conducted in such a manner to protect a Party's right to file for patent protection if applicable and shall not require disclosure of IP that falls outside of Site Specific IP or Co-Created IP specific to the MIDP Site.

5. Ownership of Intellectual Property

Each Party will at all times continue to own its pre-existing IP, as well as any IP that it creates as a part of its business not specific to the MIDP Site or, in the case of Sidewalk, independent of the specifications or specific requirements of the MIDP Site or outside of the MIDP Site relationship ("**Non-MIDP Site IP**"). Where the two Parties jointly participate (or expressly engage others to create for them jointly) in the creation of IP ("**Co-Created IP**"), the ownership or rights in that IP will be determined with regard to the Parties' relative contributions to the creation of that Co-Created IP, as may be agreed by the Parties. The Parties recognize that Co-Created IP may be jointly owned, or may be owned by one Party, with or without rights granted to the other Party – as may be determined in accordance with the MIDP or Implementation Agreements, as applicable. Also, "**Site-Specific IP**" may be created, which means IP that:

a. is specifically and exclusively related to the MIDP Site;

b. involves any physical, geotechnical and environmental surveys and/or reports of the existing conditions, any architectural plans or drawings, and/or related work product that is produced for the exclusive use of the Parties by a third-party consultant; and

c. is produced solely (A) based on the specifications or the specific requirements of the respective MIDP Site property and (B) for the purposes of the Project during the period commencing October 16, 2017 and terminating on the date that the Plan Development Agreement shall expire or be terminated.

"Site-Specific IP" shall include only the final versions of the items mentioned in this paragraph and not any prior drafts or preliminary materials that are not otherwise incorporated or used by the Parties.

"Site-Specific IP" does not include Non-MIDP Site IP or Co-Created IP or any other IP produced, used, licensed and/or owned by either Party.

Any dispute regarding ownership or rights will be resolved in accordance with the Collaboration Principles.

For the avoidance of doubt, no IP shall be Co-Created IP or Site-Specific IP unless and until the Parties mutually agree in writing that such IP constitutes Co-Created IP or Site-Specific IP, respectively.

6. Use of Intellectual Property

The Implementation Agreements will set out what use rights Waterfront Toronto will have in Sidewalk Labs' Non-MIDP Site IP utilized at the MIDP Site, and what use rights either Party will have in Co-Created IP and Site-Specific IP.

Waterfront Toronto, on behalf of its public stakeholders, will seek to ensure that the public is reasonably compensated for the opportunities Waterfront Toronto may make available to Sidewalk Labs (including use of the Testbed) to test and bring to market at scale Products and Services that contain Sidewalk Labs'

Non-MIDP Site, Co-Created IP and Site-Specific IP. Any such compensation is subject to agreement in the Implementation Agreements.

Generally, under the Implementation Agreements, Waterfront Toronto will not have rights to use Sidewalk Labs' Non-MIDP Site IP, except to the extent the Parties agree that it is embedded in Co-Created IP or Site-Specific IP. With respect to jointly owned Co-Created IP, Waterfront Toronto may have the right to use Co-Created IP in order to bring it to market, if Sidewalk Labs decides not to do so, subject to the terms that the Parties' agree to in the process described in Section 4.

7. Compensation from Intellectual Property

The Implementation Agreements will set out what compensation, if any, will be paid to the Parties in respect of the various types of IP discussed above and the Parties' respective rights and contributions therein.

8. Use of Site-Specific IP by Waterfront Toronto

If the PDA is terminated pursuant to Section 9.01 of the Plan Development Agreement, Waterfront Toronto will have an irrevocable, perpetual, royalty free, non-sub-licensable, non-exclusive license to use the Site-Specific IP in the Designated Waterfront Area

In such circumstances, Sidewalk Labs agrees to use commercially reasonable efforts to seek reliance letters, as required, from any relevant counterparties in order to entitle Waterfront Toronto to rely on such Site-Specific IP.

9. Commercialization of IP

The Implementation Agreements will include further agreements and other terms and conditions around commercialization of specific IP.

10. Pilots

The Parties will work together to determine IP terms if relevant to pilot projects that may be demonstrated by Sidewalk Labs at the MIDP Site ("**Pilots**"), with the terms taking into consideration the relative contribution levels of the Parties to the Pilots. No terms will need to be determined for Sidewalk Labs' Non-MIDP Site IP or pilots to the extent that they embody Sidewalk Labs Non-MIDP Site IP.

11. IP In Context

The Parties acknowledge that the issues outlined above must be considered in the MIDP and the Implementation Agreements in the context of other important matters to be considered in the MIDP, including issues related to land valuation, procurement, etc.

SCHEDULE H
FREEDOM OF INFORMATION AND CONFIDENTIALITY

Capitalized terms used but not otherwise defined in this Schedule H shall have the meanings ascribed to them in the Plan Development Agreement.

1.03 **Freedom of Information and Confidentiality Policies**

(a) Sidewalk Labs acknowledges that Waterfront Toronto has adopted a freedom of information policy ("**FOI Policy**") under which it has committed to make certain information available to requesting parties, subject to certain exceptions. A copy of the FOI Policy is available at: http://www.waterfrontoronto.ca/nbe/portal/waterfront/Home/waterfronthome/about-us/accountability/policies.

(b) In accordance with the FOI Policy, all financial or commercial information of Sidewalk Labs that is supplied in confidence to Waterfront Toronto, including trade secrets, scientific, technical and labour relations information (collectively, "**Sidewalk Confidential Information**") previously or hereafter supplied by or on behalf of Sidewalk Labs to Waterfront Toronto or its representatives in connection with the Framework Agreement or the Plan Development Agreement, is exempt from disclosure under the FOI Policy and will not be disclosed by Waterfront Toronto, and Waterfront Toronto will ensure that none of its members, directors, affiliates or representatives disclose the Sidewalk Confidential Information to any person other than to Waterfront Toronto's advisors, except as set out herein, otherwise agreed in writing or required by applicable Law.

(c) Sidewalk Confidential Information shall not include any information that: (a) is or subsequently becomes generally available to the public through no fault of Waterfront Toronto; (b) Waterfront Toronto has or knew at the time of disclosure or subsequently acquires by lawful means, in each case from a third party who did not provide such information to Waterfront Toronto (i) in breach of confidentiality obligations to Sidewalk Labs, or (ii) on a confidential basis; or (c) is independently developed by Waterfront Toronto without reference to any Sidewalk Confidential Information or to any Co-Created IP or to any Site-Specific IP.

(d) Sidewalk Labs shall ensure that all Sidewalk Confidential Information is appropriately marked as "confidential" to indicate that it is financial or commercial information (including trade secrets, scientific, technical and labour relations information) and has been provided in confidence.

(e) Sidewalk Labs shall acknowledge that under the FOI Policy, portions of records containing Sidewalk Confidential Information may be disclosed by Waterfront Toronto to the extent such portions do not contain Sidewalk Confidential Information, Co-Created IP or Site-Specific IP and are not otherwise exempt from disclosure under the FOI Policy.

(f) If Waterfront Toronto receives a request for access to information that includes Sidewalk Confidential Information, Co-Created IP or Site-Specific IP, Waterfront Toronto shall:

(i) give prompt written notice to Sidewalk Labs of the request and the Sidewalk Confidential Information, Co-Created IP or Site-Specific IP that Waterfront Toronto considers to be within the scope of the request;

(ii) allow Sidewalk Labs twenty days to make representations to Waterfront Toronto as to why the Sidewalk Confidential Information, Co-Created IP or Site-Specific IP in question should not be released (in whole or in part), including

representations substantiating that such Sidewalk Confidential Information is in fact financial or commercial information of Sidewalk Labs that is supplied in confidence to Waterfront Toronto (including trade secrets, scientific, technical and labour relations information);

(iii) make a decision with respect to the disclosure of the relevant Sidewalk Confidential Information, Co-Created IP or Site-Specific IP, acting reasonably and in good faith, taking into consideration the representations of Sidewalk Labs; and

(iv) inform Sidewalk Labs of its decision and, if applicable, disclose the relevant information in accordance with the process set out in the FOI Policy.

(g) Waterfront Toronto further agrees not to disclose records containing information that is mutually generated by Waterfront Toronto and Sidewalk Labs without Sidewalk Labs' prior written consent and agreement with respect to reasonable restrictions on use and sharing, and the application of safeguards to protect, such information, and to notify Sidewalk Labs of any breaches, subject to and in accordance with the FOI Policy.

(h) Sidewalk Labs agree that that all financial or commercial information of Waterfront Toronto that is supplied in confidence to Sidewalk Labs, including trade secrets, scientific, technical and labour relations information, to the extent not otherwise available in the public domain, will not be disclosed by Sidewalk Labs, and Sidewalk Labs will ensure that none of their respective members, directors, affiliates or representatives disclose any such confidential information to any person other than to Sidewalk Labs' advisors or affiliates, except as set out herein, otherwise agreed in writing or required by applicable Law.

1.04 **Freedom of Information and Protection of Privacy Act**

(a) Sidewalk Labs acknowledges that Waterfront Toronto may become subject to FIPPA. In providing any Sidewalk Confidential Information to any Government Authority (including to any shareholder of Waterfront Toronto), Waterfront Toronto will make such Governmental Authority aware of the confidential nature of such Sidewalk Confidential Information and shall use commercially reasonable efforts to obtain such Governmental Authority's agreement not to disclose such Sidewalk Confidential Information other than as contemplated by the terms of the Plan Development Agreement (including to comply with Section 1.03(f) of this Schedule as if such Governmental Authority were Waterfront Toronto) or as required by applicable Law.

(b) If Waterfront Toronto receives any request for information under FIPPA for access to any record(s) containing or based on Sidewalk Confidential Information, Co-Created IP, Site-Specific IP or other information provided by or on behalf of Sidewalk Labs, or mutually generated by Waterfront Toronto and Sidewalk Labs, the terms and conditions of Section 1.03(f) of this Schedule shall apply (substituting the term "**FIPPA**" for the term "**FOI Policy**").

1.05 **Compliance with FOI Policy or FIPPA**

(a) Waterfront Toronto shall not be deemed to be in breach of the Plan Development Agreement, and shall have no liability to any Party, for disclosure of any information in good-faith compliance with its FOI Policy or, if applicable, FIPPA.

(b) Sidewalk Labs acknowledges that decisions by any of the Three Orders of Government to disclose information related to the Project pursuant to a request made under to FIPPA, shall be made in consultation with Waterfront Toronto and Sidewalk Labs, but that following such consultation the ultimate decision to disclose such information will be made by the applicable one of the Three Orders of Government.

1.06 **Public Release of Plan Development Agreement and Framework Agreement**

The Parties agree that immediately following execution of the Plan Development Agreement, the Plan Development Agreement, including all schedules thereto, shall be made publicly available by posting the Plan Development Agreement and its schedules to the "Documents" section of each of the Sidewalk Toronto and Waterfront Toronto websites. The Parties further agree that the Framework Agreement including all schedules thereto, which shall be superseded in its entirety upon execution of the Plan Development Agreement pursuant to Section 14.04 thereof, shall also be made publicly available by posting the Framework Agreement and its schedules to the "Documents" section of each of the Sidewalk Toronto and Waterfront Toronto websites.

SCHEDULE I
DIGITAL GOVERNANCE FRAMEWORK PRINCIPLES

The intent of these initial Digital Governance Framework Principles is to set the values that underpin the design and development of the Master Innovation and Development Plan. The purpose is to ensure that digital innovations and solutions protect personal privacy and civil liberties while providing shared benefits, including as an economic catalyst for open innovation, and to inform the broader public policy dialogue on digital technology and data. Exigent circumstances impacting these principles or matters arising from conflicting principles will be adjudicated in a transparent manner. Capitalized terms used but not otherwise defined herein shall have the meanings ascribed to them in the Plan Development Agreement.

All work contemplated for the Project will proceed in a manner consistent with applicable legislation (as amended from time to time), including but not limited to:

- *Canadian Charter of Rights and Freedoms*
- *Personal Information Protection and Electronic Documents Act* (PIPEDA) (Canada)
- *Privacy Act* (Canada)
- *Municipal Freedom of Information and Protection of Privacy Act* (Ontario)
- *Freedom of Information and Protection of Privacy Act* (Ontario)

This Digital Governance Framework Principles contains the following guiding digital design principles (the "**Guiding Digital Design Principles**"):

1. **Personal privacy, civil society protections and technological sovereignty**
    - An unwavering commitment to ethical use of technology and data consistent with Canadian values.
    - Data protection rules and measures that go beyond the current legislative requirements and create the most privacy protected/citizen–centered set of policies and governance structures in the world, recognizing privacy as a fundamental human right.
    - Explore novel forms of data governance, such as (a) an independent data trust with representation by both data subjects and citizens more generally. The trust could carry a fiduciary responsibility to serve and balance data subject and public interest within a framework that treats privacy from both a public as well as a private good perspective.
    - Assurance that concerns that the Project could result in surveillance are meaningfully addressed.
    - Any form of surveillance of individuals will be identified and assessed with respect to risks to human or democratic rights, remedied where necessary. These practices will be periodically reviewed in a transparent and accountable manner to ensure the highest standards of rights protections are achieved and maintained.

- Assurance that concerns about the potential misuse of data, including data collected in the public realm, are addressed proactively by fulfilling individuals' rights to access and review their data.

- Specific measures to ensure transparency of collection, use, retention and disclosure of personal data; minimisation of collection, use, retention and disclosure to what is necessary for the provision of the services and benefits individuals.

- Appropriate use of de-identification, edge technologies, and other leading edge technological protections to ensure privacy is protected.

- Allow individuals access to their own personal data to review it and have it corrected or deleted as appropriate.

- Meaningful, informed consent and opt-out provisions.

- A fundamental commitment to inclusive design and bridging all aspects of the digital divide (e.g., socio-economic, skills-based, mobility, etc.).

- An overarching commitment to leveraging this Project to enhance capacity, including efforts to improve digital literacy and skills.

2. Data governance and stewardship that ensures both data/information sovereignty protection and innovation

- Clear and robust structures of accountability for the safe use of data including open protocols and rules, to ensure public policy objectives are met.

- Best practice approaches to authorized data use and intellectual property practices so to not inadvertently undermine Guiding Digital Design Principles.

- Careful use of aggregated data, and algorithmic transparency to avoid bias or marginalization of members or groups of the population.

- Reasonable limits on use of even aggregated data.

- Novel ownership structures for non-personal data, and associated open protocols and rules, to ensure public policy objectives are met, including access by and potential ownership of data by Waterfront Toronto, the City of Toronto, Province of Ontario or Government of Canada or other such third parties as deemed appropriate by the Parties. Data ownership will be addressed in greater detail through the MIDP.

3. Data sovereignty; storage and routing

- Granular policies regarding data sovereignty and routing that are informed by legislative requirements, global best practices and project objectives (e.g., potential research and development exemptions, support escalation requirements, etc.), which policies would be adopted and made public.

- Jurisdictional localization and equivalent protection provisions consistent with Canadian data protection laws will be incorporated.

4. **Serve as an enabler/catalyst for open innovation**

    - Foster the development of global standards for urban digital architectures including by designing systems/platforms to be open by default – minimal proprietary architecture to be deployed, as disclosed and demonstrated as necessary, in order to foster innovation, promote competition, create freedom of consumer choice.

    - Ensure that protocols, standards and operating agreements do not foster monopolies, barriers to entry or lock-in (including to Sidewalk Labs and affiliates).

5. **Responsive/agile policy framework to adapt to new realities**

    - Ensure products and policies are being designed to adapt quickly to both legislative modernization and unforeseen issues that impact the perceived/real safety or security of institutions and citizens.

6. **Ensure a secure environment for all products and services**

    - Ensure that all data collected is secure.

    - Ensure that all infrastructure and solutions are resilient.

7. **Responsible Data Use**

    - Implement a citizen and public interest centred approach to responsible data use.

    - Ensure digital principles are transparent, open and always implemented in a way that will foster community trust.

The Guiding Digital Design Principles of this Digital Governance Framework will apply to all aspects of the development of the Project.

Digital Strategy Advisory Panel

The Digital Strategy Advisory Panel (the "**Panel**") will advise Waterfront Toronto on matters related to digital and innovative technology. The Panel was established June 7, 2018 to help ensure the protection of public interest and to encourage innovation.

The Panel is an arms-length body intended to help guide Waterfront Toronto on how best to incorporate data privacy, digital systems, and the safe and ethical use of new technologies. The design and structure of proposed digital solutions, including the use of collection and use of data, and innovations proposed to be implemented in the MIDP will be subject to review and recommendation by the Panel. The Panel will also ask, more fundamentally, "just because new technology or data use can be created, should it be?"

The mandate of the Panel is to provide Waterfront Toronto with objective, expert advice to ensure that principles of ethical use of technology, accountability, transparency, protection of personal privacy, data governance and cyber security are upheld. While the Panel's advice is non-binding, its deliberations will be an important element in Waterfront Toronto building the trust it requires with civil society to achieve the social license necessary for a successful, and ethical, digital layer to be fostered as part of the Project. In addition to the Panel, Waterfront Toronto will continue to work closely with governments and policy

makers, the public, industry experts, and external legal counsel, to help coordinate the rules and accountability protocols that will be integral to the success of these initiatives.

The Panel includes Canadian and international subject matter specialists from academia, industry, the civic technology community and legal experts. Information about the panel can be found online at https://waterfrontoronto.ca/nbe/portal/waterfront/Home/waterfronthome/about-us/who-we-are/digital+strategy+advisory+panel+members.

SCHEDULE J
COMMUNICATIONS AND GOVERNMENT RELATIONS PRINCIPLES

Capitalized terms used but not otherwise defined in these Communications and Government Relations Principles (the "**GR/PR Principles**") shall have the meanings ascribed thereto in the Plan Development Agreement.

ARTICLE 1 - INTRODUCTION

1.01 **Preamble**

(a) Waterfront Toronto and Sidewalk Labs have entered a bold, first of its kind, and innovative approach to city-building to deliver transformative benefits in quality of life to a diverse set of residents, workers, and visitors in Toronto. This requires the collaboration of Waterfront Toronto and Sidewalk Labs to develop the MIDP.

(b) Communications are vitally important to the mission and vision of the MIDP and contribute directly to the trust and engagement of the public and government stakeholders. The Parties' shared objective is to provide timely, accurate, and high-quality information about plans, progress, and initiatives in connection with the MIDP, allowing for effective public engagement.

1.02 **Purpose; Scope**

(a) This Agreement is intended to (1) clarify roles and responsibilities of the Parties, (2) enable clear, consistent and coordinated communications to the public and government stakeholders to meaningfully engage with them regarding the public policy implications of the innovations being proposed in the MIDP, (3) build public and stakeholder trust and understanding of the MIDP, (4) enhance communications processes to facilitate efficient organizational performance, and (5) provide appropriate visibility into external communications for each Party, including of the Waterfront Toronto Board, employees, and government stakeholders.

(b) These GR/PR Principles are consistent with and will be informed by Waterfront Toronto's well-established public engagement and government relations practices and successful approach/track record on stakeholder engagement, which are anchored by seven principles: (1) Accountability, (2) Clarity, (3) Timeliness, (4) Openness and Inclusivity, (5) Flexibility, (6) Coordination, and (7) Evaluation.

(c) These GR/PR Principles will guide the planning, development, and implementation of all communications activities related to the development of the MIDP.

1.03 **Messaging – Form, Content and Timing**

(a) The Project Management Committee will review twice monthly public relations and government relations matters including content development, approvals timing, approvals status. The Project Management Committee will be the venue through which the Parties share information and coordinate on public relations and government relations matters as contemplated by these GR/PR Principles.

(b) Waterfront Toronto and Sidewalk Labs will jointly coordinate all media relations and responses to public requests related to the MIDP.

(c) Any public communications and materials related to the MIDP must be jointly approved by both Parties, including announcements and information posted on the Sidewalk Toronto website, with such materials circulated in advance to provide enough time for staff to review and comment on content, and for proper approvals.

(d) For message clarity, meeting materials related to the MIDP must be approved in advance by both Waterfront Toronto and Sidewalk Labs prior to any public meetings. No information related to the MIDP will be presented to the public or in a media release unless it has been approved by Waterfront Toronto and Sidewalk Labs, both in form and content.

(e) A jointly developed "rolling" communications plan will form the foundation for all public communications related to the MIDP.

(f) Communications with the public related to the MIDP, either orally or written (including electronic or in the form of promotional materials), will comply with these GR/PR Principles.

ARTICLE 2– PUBLIC ENGAGEMENT

2.01 Public Engagement, Social Media and Media Relations

(a) Engaging the Broader Public

Public engagement is instrumental in creating a MIDP that reflects the priorities of the communities it will affect. Broader public input will be sought in various forms, including public roundtables, as summarized below and set out in the Parties' shared engagement plan included on the Sidewalk Toronto website. Information about the date and location of these events will be listed on the Sidewalk Toronto website.

An urban installation and interactive showcase, located at 307 Lake Shore Boulevard East, was opened to the public on June 16, 2018, to serve as a unique physical location where the public can learn more about the Parties' ideas and vision and can share their own thoughts and feedback on the Project.

(b) Sharing Information

News and updates on the Project, as well as feedback and input obtained from consultations, will be shared with the public through four main methods:

(1) community engagement (e.g., dissemination of information in public forums, public talks);

(2) media releases (e.g., press releases, news articles);

(3) social media outlets (e.g., Facebook, Twitter, Instagram); and

(4) the Sidewalk Toronto website, which is expected to include publication of outputs from research, polls and surveys.

(c) Roles and Responsibilities—Public Engagement

The table below sets out the roles and responsibilities of the Parties for the various aspects of their public engagement strategy, subject to coordination through and guidance by the Project Management Committee:

Engagement Forum	Lead*	Description
Public Roundtables	Waterfront Toronto	Opportunity for the public to be kept up-to-date on the Parties' progress, to work in small facilitated groups, and to help shape the Parties' plans and goals, challenging assumptions and refining their thinking during key phases in the creation of the MIDP.
Design Jams/Design Charettes	Waterfront Toronto	Working alongside subject matter experts, such as architects and planners, examine specific elements of the Parties' potential plan and suggest ways to improve design and architectural elements.
CivicLabs	Waterfront Toronto	Detailed exploration of issues facing cities, such as mobility, housing and inclusion, and brainstorm of possible solutions that can be piloted by the Parties.
Neighbourhood Meetings	Waterfront Toronto	Partnered events with local organizations and community associations to share updates on the MIDP, answer questions and seek feedback.
Pop-Ups	Waterfront Toronto	A range of pop up activities that will bring conversations into vibrant public spaces in neighborhoods outside of the waterfront in an engaging and meaningful way throughout the summer months and beyond.
Advisory Working Groups	Sidewalk Labs	Six advisory working groups comprising local subject matter leaders as well as community members to meet with project team members and advise on: Sustainability, Public Realm, Housing Affordability, Community Services, Data Governance, and Mobility.
Reference Panel	Sidewalk Labs	A 36-person panel of residents from across the city representing the diversity of Toronto to help provide policy and planning guidance and insights.
Sidewalk Talks	Sidewalk Labs	Special dialogues with leading researchers, writers, architects, technologists, ethicists and planners on topics related to the future of cities that are relevant to the Project but not Project related.
307 Lakeshore	Sidewalk Labs	Showcase for urban living technologies, cultural programming, and interactive exhibits and workshops to learn more and help shape the MIDP.
Social Media	Co-Lead	Facebook, Twitter, and Instagram accounts relating to the Project will be maintained. In addition, Waterfront Toronto maintains its own social media channels, including a blog, and Sidewalk Labs likewise maintains its own social media channels. These channels will continue to exist in parallel. To bring clarity, the table below sets out the Parties' social media strategy.

* For the purposes of these GR/PR Principles, the Parties envision co-creation and collaboration throughout their public engagement strategy, and joint approval of public communication materials related to the MIDP, including topics and meeting materials for the above.

(d) Social Media Strategy

The public engagement calendar and attendant communications plan will influence the Parties' social media strategy and set guidelines for timing, spacing, and intensity of social content, which has the following goals and objectives:

Goals	Objectives
INFORM To be the community's key source of information on the Project	▪ Use channels to share events, meetings, updates, and announcements with the public ▪ Enhance and highlight important Project/event features (recap videos, highlight reels, spotlights, summaries of events) ▪ Share public engagement milestones, stories, and successes
ENGAGE To listen to the community, respond, and provide opportunities to be involved	▪ Provide opportunities for the public to participate and engage online (e.g. livestreams, tweet chats, Reddit Q&A) ▪ Responsive and engaged community management; respond to comments, engage in online conversation ▪ Listen and learn from public feedback, ensuring participant opinions/comments are acknowledged
GROW To grow reach and network across a diversity of audiences	▪ Proactively reach out to a diverse set of online constituencies ▪ Draw people from throughout the Greater Toronto & Hamilton Area and Ontario to in-person events, so digital relationships extend to real-world relationships

ARTICLE 3 - GOVERNMENT

3.01 **Government Relations**

(a) Waterfront Toronto and Sidewalk Labs will jointly communicate with government bodies at the municipal, provincial, and federal levels at regular intervals throughout the development of the MIDP.

(b) Waterfront Toronto is accountable to its government stakeholders, and this accountability will be maintained throughout the development of the MIDP. Sidewalk Labs acknowledges that Waterfront Toronto may be required to meet its government stakeholders without notice.

(c) Waterfront Toronto will continue its responsibility to provide updates to the Intergovernmental Steering Committee (the "**IGSC**") on the development of the MIDP. The IGSC working group will meet regularly, and Waterfront Toronto will provide updates and seek input from all orders of government, in close coordination with Sidewalk Labs, on the Project. This group will act as a coordination vehicle for reviewing, evaluating, and providing input on the MIDP and the Principal Implementation Agreements.

(d) In addition, the development of the MIDP may involve meetings with Canadian government boards, agencies, and commissions.

(e) Where a meeting is initiated by Waterfront Toronto or Sidewalk Labs in connection with the MIDP, the initiating Party will notify and coordinate messaging with the other.

(f) Where a meeting is initiated by a government directly to one of Waterfront Toronto or Sidewalk Labs regarding the MIDP, the Party receiving the invitation will notify the other and, if appropriate and desired, coordinate a joint meeting.

(g) For purposes of these Principles, a "meeting" is with an office holder or senior public official and can be in person or by teleconference.

(h) Communications to and from governments regarding the MIDP will be shared, and responses coordinated, between Waterfront Toronto and Sidewalk Labs.

SIDEWALK TORONTO

Responsible Data Use Policy Framework

1 May 2018
Version 0.2

WATERFRONTtoronto

SIDEWALK LABS

Responsible Data Use Policy Framework

Version 0.2

Sidewalk Toronto is a joint effort by Waterfront Toronto and Sidewalk Labs to create a new kind of complete community on Toronto's waterfront that combines cutting-edge technology and forward-thinking urban design to help address major challenges of urban growth, from sustainability to affordability to economic opportunity. We believe Sidewalk Toronto can provide a global model for future cities to build on.

Data has an important part to play in bringing this vision to life. First, data can power tools that improve the day-to-day operation of a neighbourhood and make it more responsive to local needs. Second, access to data can enable the community—including researchers, startups, civic organizations, and residents—to develop new tools and services for itself, creating a virtuous cycle of urban innovation.

Cities—and businesses operating in cities—have long collected data to help address challenges and provide better services, from mapping the spread of disease to fielding noise complaints via 311 to monitoring public safety with closed-circuit cameras. Often, these efforts happen in the absence of a meaningful public dialogue or policy framework, leaving people with valid concerns about the impact on their personal privacy.

So while privacy concerns around urban data are not new, we believe that Sidewalk Toronto has a unique opportunity—and a core responsibility—to innovate not just on how data will be used, but on how its use will be governed.

Process and Guiding Principles

The Sidewalk Toronto planning process will result in a "Master Innovation and Development Plan," released at the end of 2018, that will lay out detailed programmatic plans for the waterfront. One important component of the plan will be a Responsible Data Use Policy, which will govern the collection and use of data.

To help develop this policy, and to receive guidance on a full range of issues relating to responsible data use, Sidewalk Toronto has convened a Data Governance Advisory Working Group made up of independent experts and community representatives. This group will work alongside other project advisors, including Dr. Ann Cavoukian, three-term Information and Privacy Commissioner of Ontario; Chantal Bernier, former interim Privacy Commissioner of Canada; and Waterfront Toronto's Digital Strategy Advisory Panel.

Sidewalk Toronto's Responsible Data Use Policy will build on the strong foundation established by Canadian privacy laws and aim to realize their spirit and content more fulsomely than any other project to date, as well as building on recent recommendations by federal and provincial Canadian privacy regulators. It will be a product of ongoing, comprehensive engagement and consultation with Canadian experts, stakeholders, and the public—a living document that evolves with the project itself.

Responsible Data Use Policy Framework

Version 0.2

Our early work with these advisors, together with feedback gathered as part of the Sidewalk Toronto public engagement process, has led to the development of a set of principles that will inform decisions on how the community's data and information is responsibly collected, stored, used, processed, and secured:

- **Beneficial purpose.** Data collection and use should be purposeful, intentional, and tightly connected to the ultimate benefit that we are striving to achieve. We will not collect data for the sake of having data.
- **Transparent.** We will be transparent about what we are collecting and why, clearly explain the intended benefit of that data use, and communicate any changes.
- **Open.** Whenever possible and without compromising personal privacy, we will seek to make the data collected as part of Sidewalk Toronto open and accessible, with the goal to enable innovation and entrepreneurship.
- **Proactive engagement.** We will proactively engage the community on data use and will continue to listen and learn from the community as we grow and develop.
- **Community trust.** We want the community to trust that our projects, products, and services are developed with its needs in mind. Having good data-handling practices and minimizing breaches of trust is therefore integral to our development process.
- **People first.** Our people-first approach to responsible data use will apply Canadian values of diversity, inclusion, and privacy as a fundamental human right.

In addition, based on work with advisory groups and public feedback, we have determined that the Responsible Data Use Policy will have four main areas of focus:

1. **Privacy** is about individual control over how personal information is collected, used, and shared.
2. **Data stewardship** is about the use, control, ownership, and storage of data.
3. **Access to data** deals with questions of how broadly and on what terms data is made available.
4. **Data security** is about protecting data and minimizing the potential for breaches.

Responsible Data Use Policy Framework

Version 0.2

Commitments and Open Questions

Our collaborative work on the first of these areas, privacy, has advanced sufficiently for us to make a number of commitments. Our work in the other areas remains in development but is being guided by some critical questions we continue to explore in consultation with the public and our expert advisory groups.

Privacy

Privacy is about individual control over how personal information is collected, used, and shared. Different rules and protections may apply to different kinds of data, depending on the extent to which individuals can be identified from the data. Sidewalk Toronto will, however, implement appropriate guidelines and policies governing the use of all data, including data that is not personal information, such as environmental data.

With respect to privacy, Sidewalk Toronto makes the following commitments:

- **We will always inform individuals of how and why their personal information is being collected and used, and we will do so in a way that is proactive, clear, and easy to understand.**
- **We will embed data privacy into everything we do from the very start, an approach known as Privacy by Design.**
- **If a service to which you opt in requires individual identification, you will have meaningful control over how your information is used. Otherwise, data that includes personal information will be "de-identified" by default—anonymized and designed not to trace back to any individual.**
- **We will seek meaningful consent from individuals and honour their choices.**
- **We will conduct privacy impact and threat risk assessments to help ensure that privacy and security risks are identified and adequately addressed in the design of new technologies and programs.**
- **We will publish summaries of the privacy implications of key initiatives in advance, as guided by the Data Governance Advisory Working Group.**
- **We will not sell personal information to third parties, or use it ourselves for advertising purposes.**

In addition to these commitments, we continue to explore several questions related to privacy, including:

- *What does "meaningful consent" look like with data collected in the public realm—for instance, with cameras located at intersections to help improve street safety?*
- *Are there some types of collection and uses of personal information that should never be considered?*
- *How can we plan to improve digital literacy so all stakeholders—including individuals, government, and companies—better understand the benefits and their choices?*

Responsible Data Use Policy Framework

Version 0.2

Data Stewardship

Data stewardship is about the use, control, ownership, and storage of information. It includes considerations such as governance (who oversees decisions related to data use), data residency (where data is stored), and usage terms (how data is licensed or shared). A strong policy on data stewardship must thoughtfully balance public and individual interests.

The questions on data stewardship that we are exploring include:

- *What are some conventional approaches to data ownership in cities, and what are their strengths and weaknesses?*
- *What responsibilities come with "owning" data (such as security or infrastructure maintenance)?*
- *What are the technological, economic, and security-related advantages and disadvantages of requiring data to be stored in Canada?*
- *Are there viable innovative models of governing urban data, such as establishing a non-profit data trust that oversees decisions?*
- *If an independent entity such as a data trust were to exist, what impact might that review process have on the speed of innovation?*

Access to Data

Access to data deals with questions of how broadly and on what terms data is made available. Open access encourages participation, innovation, learning, and improvements in all aspects of public life while also discouraging lock-in around specific products or companies (including our own). To achieve that goal, Sidewalk Toronto envisions a digital platform governed by open standards, providing well-designed, well-documented, and well-supported APIs to third-party developers.

The questions on access to data that we are exploring include:

- *What processes should be used to decide what data is made public, and how can these processes address privacy and public safety concerns?*
- *How could an open data protocol for Sidewalk Toronto complement the city's existing Open Data Catalogue?*
- *How do we encourage a vibrant startup community while making sure it uses data in ways that benefit neighbourhoods?*
- *What is the right balance to strike between making data broadly available and ensuring that entrepreneurs have the necessary incentives to set up shop and develop intellectual property as part of Sidewalk Toronto?*

Responsible Data Use Policy Framework

Version 0.2

Data Security

Data security is about protecting data and minimizing the potential for breaches. We will work with best-in-class security solutions and partners to protect data that has been collected, and require anyone who uses this platform to meet the same high standard of security. We will welcome third-party audits of our security and de-identification protocols.

The questions on data security that we are exploring include:

- *What are strategies for achieving both open digital infrastructure and best-in-class security?*
- *How do we make our systems easily auditable and transparent?*
- *How do we enforce a rigorous security policy without creating a barrier to entry for startups?*
- *What type of transparency should exist around security threats or breaches?*

Share Your Thoughts

We welcome your comments, questions, and feedback on this policy framework at one of our upcoming Sidewalk Toronto public consultation programs or via email at privacy@sidewalktoronto.ca.

CIVIC LAB

DIGITAL AND DATA GOVERNANCE

NOVEMBER 23, 2018



Civic Lab on Digital and Data Governance

November 23, 2018

TABLE OF CONTENTS

Agenda ....Tab 1

Talking Points ....Tab 2

- with Qs & As

WT Civic Labs Info Sheets ....Tab 3

- Smart Cities
- Digital Governance
- Data Collection and Use
- Algorithms

ISED Background Materials ....Tab 4

- Government Response to ETHI Committee Report
- National Digital and Data Consultations Public Placemat
- Background briefs & Key Messages on:
  - StatsCan data collection
  - EU Adequacy Status (privacy)
  - Sidewalk Toronto
  - National Digital and Data Consultations
  - Review of PIPEDA
  - Data Breach Reporting
  - Artificial Intelligence

Smart Cities Challenge ....Tab 5

- Key Facts Sheet
- SCC Finalists

WATERFRONToronto

Quayside Civic Lab
AGENDA

November 23, 2018
12:30pm

Globe and Mail Centre
Nahanni Room

12:30pm	Welcome and Opening Remarks	**Michael Geist**, Chair, Digital Strategy Advisory Panel
12:35pm	Introductions & Agenda Review	**Nicole Swerhun**, Facilitator
12:50pm	Waterfront Toronto	**Kristina Verner**, Vice President, Innovation , Sustainability & Prosperity, Waterfront Toronto
12:55pm	City of Toronto	**David Stonehouse,** Waterfront Secretariat, City of Toronto
1:00pm	Overview	**Chantal Bernier**, Canadian Privacy and Cybersecurity Practice, Dentons
1:10pm	Environmental Scan	**Teresa Scassa**, Canada Research Chair (CRC) in Information Law and Policy, University of Ottawa
1:20pm	City of Toronto	**Lawrence Eta**, Deputy Chief Information Officer, City of Toronto
1:25pm	Environmental Scan	**Pamela Robinson,** Associate Dean, Ryerson University
1:35pm	Government of Canada	**Glenn Campbell**, Assistant Deputy Minister, Investments, Partnerships and Innovation, Infrastructure Canada
1:40pm	Question and Answers	All
1:55pm	Roundtable Discussion	All
2:40pm	Report Back	All
3:15pm	Closing Remarks	**Kristina Verner**, Vice President, Innovation , Sustainability & Prosperity, Waterfront Toronto

Waterfront Toronto
Civic Lab on Digital and Data Governance
November 23, 2018

TALKING POINTS

- Thank Waterfront Toronto for the invitation.

- Happy to be here to provide some insights into the broader federal perspectives and activities around digital and data governance.

- Let me start by highlighting that issues surrounding digital and data governance are not unique to the Quayside context. They permeate many aspects of the digital economy across Canada and the globe.

- And **at the national level, the Government of Canada has been very present and actively engaging on questions of digital and data governance.**

- To illustrate, let me share an overview of **two digital strategy initiatives underway in Treasury Board Secretariat and Innovation, Science and Economic Development Canada**, both of which have involved significant public input and engagement.

- I'll then briefly describe some of Infrastructure Canada's interest in fostering innovation in infrastructure through technology and smart communities.

[PAUSE]

- Within the federal government there is an **internal exercise underway at Treasury Board Secretariat** to

transform the delivery of Government's digital services for the benefit of citizens.

- An important part of this transformation is getting the Government's own house in order in terms of how it approaches digital and data governance.

- To guide this approach, an overarching **Digital Policy** is being developed by Canada's Chief Information Officer in consultation with Canadians.

- The Digital Policy will set out how the Government manages service delivery, information and data, and technology, as well as components of cybersecurity.

- Out of the latest Digital Policy consultation process came an understanding of the need to strike a balanced

approach that allows for iteration, flexibility and openness, and **respect for privacy and security**.

- As the Chief Information Officer has stated: "**Adopting the use of cutting edge technology doesn't mean this comes at the expense of our protection of Canadians. It's all about finding the right balance between innovation and the application of technology within a strong ethical framework.**"

- This sums up well how the Government of Canada intends to approach the transformation of its own digital services to Canadians.

- Those interested in following developments and joining the discussion can go to open.canada.ca

[PAUSE]

- Whereas the first example is more internal to government, **Innovation, Science and Economic Development Canada** – or ISED – **is engaging on data governance questions from a broader innovation and competiveness perspective.**

- In the context of a competitive, data-driven economy, it is not surprising that business and individuals want to engage in specific discussions on questions of privacy and trust.

- And they have.

- In February 2018, the **House of Commons Standing Committee on Access to Information, Privacy and Ethics tabled its review of the Personal Information Protection and Electronic Documents Act** (or PIPEDA).

- The Committee held 16 public meetings and heard from 68 witnesses, including privacy experts and representatives from the government and private sector organizations. The Committee also received 12 briefs on this topic.

- The Committee's recommendations reflected key areas of focus from privacy stakeholders, such as consent, individual rights, and the powers of the Privacy Commissioner of Canada to enforce PIPEDA.

- In its response to the Report, the Government stressed the importance of maintaining a balance between growing a strong digital economy and safeguarding privacy and maintaining trust of Canadians.

- It acknowledged that while PIPEDA is still supported by many stakeholders, it may not be sufficient to meet all the challenges of a data-driven economy.

- It also stressed the need for dialogue and consultations with Canadians on these questions.

- To that end, ISED launched **national consultations on data and digital transformation** in June 2018.

- I'm aware that some of you participated in the dedicated Privacy and Trust session held here in Toronto this fall.

- As well, all Canadians were invited to participate in the Digital and Data Consultations online.

- The Minister of ISED has noted that a "What We Heard" report will be published in the coming months.

- He has also signaled that the results of these consultations will guide future legislative changes related to privacy as well as other marketplace framework policy.

- In general terms, the feedback ISED received shows that public trust must play a central role if Canada is to leverage digital and data-driven technologies and position itself as a leader in the innovation-based economy.

- The feedback also shows a certain level of anxiety amongst Canadians who need further efforts to more openly trust and adopt digital services and technologies.

- So there are tensions.

- At the same time, **data-driven innovation holds great potential for public good, including as it relates to infrastructure development**.

- Take **smart cities approaches** for example.

- As many of you know, **Infrastructure Canada** is contributing to the development of community-driven smart cities solutions to improve the lives of Canadians.

- Through our current Smart Cities Challenge, Infrastructure Canada is creating an opportunity to scale and drive innovation across the country, with the aim of spreading the benefits of smart cities solutions to all Canadians.

- Infrastructure Canada is also enriching its own understanding of concerns related to the privacy of data being leveraged by communities.

- In the context of the Smart Cities Challenge, departmental officials have worked with all federal, provincial and territorial Privacy Commissioners to develop privacy guidance for finalists in the competition.

- Smart cities aren't about technology for technology's sake and any solutions applied must address digital and data governance concerns, including by complying with all federal and provincial privacy laws and regulations.

[PAUSE]

- Finally, let me turn to the **Waterfront Toronto Revitalization Initiative (Quayside) and Infrastructure Canada's engagement**.

- As some of you may already know, a tri-government Steering Committee serves as a focal point for intergovernmental management and coordination of the waterfront revitalization initiative.

- The Committee is chaired this year by Infrastructure Canada's Deputy Minister Kelly Gillis.

- As part of its overall mandate, the Committee is actively engaged with Waterfront to identify issues, provide input and coordinate efforts to support progress on all of its major initiatives, like the Port Lands Flood Protection Project and – of course - Quayside.

- **With specific regard to Quayside, Infrastructure Canada is supporting Waterfront on important aspects of the initiative**, including policy impacts.

- At Infrastructure Canada, we are working with federal partners to ensure the Quayside development is consistent and compliant with federal policy and legislative direction.

- While the digital, data, intellectual property, and privacy issues have garnered most public attention, there are also material land and infrastructure development and financing considerations as part of the eventual business model or models around the new smart city development.

- Taken together and done properly, the multiple elements of **Quayside offer an opportunity for Canada to demonstrate leadership on how a smart community can offer economic and innovation benefits, while also safeguarding data and privacy protections** that Canadians expects all orders of government, and businesses to provide.

- Thank you.

QUAYSIDE CIVIC LABS

A 12 acre Smart City on Toronto's Waterfront?

1

The Quayside Civic Labs Info Sheet Series

This is the first in a series of Info Sheets that Waterfront Toronto has developed to support a meaningful public discussion about the potential future of Quayside – specifically, its digital future.

What does that mean exactly? These four pages begin to describe it, starting with the picture below that shows you all of the ways and places that technology can influence a city. Info Sheets 2, 3, and 4 go into more detail on Digital Governance, Data Collection and Use (including data residency and privacy), and Algorithms.

What's a Smart City?

There are many aspects of city-building that are very familiar – whether we're talking affordability, sustainability, transportation, or urban design – we're familiar with the issues at hand.

A smart city introduces something new, and it's a digital layer. Smart cities have internet-connected sensors that collect data, computers that receive, analyze, and store data, and services that respond to the data. The idea is that smart cities use data to provide services that make life in the city better.

There are already many examples of existing "smart" products that rely on the internet and data – think smartphones or smart thermostats. By connecting to the internet and drawing on the data collected by a range of sensors, they provide new services that were impossible just over a decade ago.

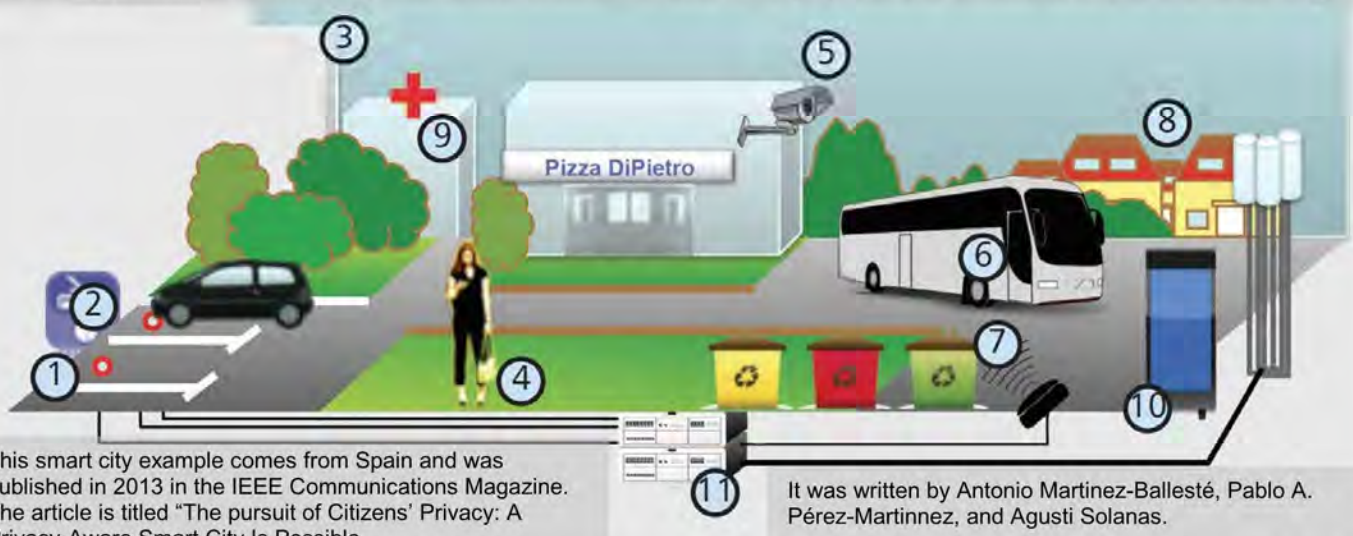
Smart city topics are new ground for Waterfront Toronto (and for city planning discussions more broadly), provoking the need to have new conversations about opportunities, risks, and the consequences associated with different choices.

Waterfront Toronto is working with some of Canada's leading thinkers – governments, academics, industry leaders, advocacy organizations, and others – to ensure that decisions related to the digital future of Quayside includes a solid understanding of choices and consequences. But that alone is not enough. Waterfront Toronto's commitment to working in the public interest means that public feedback about these choices and consequences is also critical.

Read on to find out what feedback Waterfront Toronto needs from you. Also please visit our website (www.waterfrontoronto.ca) or join us on December 8, 2018 at the 4th Quayside Public Roundtable (see back page for more details).

A smart city could include:

(1) Smart parking service that guide users to empty spots; (2) Electric car recharging; (3) Smart building with control of presence; (4) User querying an LBS provider; (5) Camera for video surveillance; (6) Smart bus that changes the route based on users needs; (7) Smart garbage containers; (8) Control of energy consumption in homes; (9) Medical centre; (10) Interactive information pole; and (11) Network infrastructure of the smart city.



This smart city example comes from Spain and was published in 2013 in the IEEE Communications Magazine. The article is titled "The pursuit of Citizens' Privacy: A Privacy-Aware Smart City Is Possible.

It was written by Antonio Martinez-Ballesté, Pablo A. Pérez-Martinnez, and Agusti Solanas.

DRAFT

A recent history of Quayside (and the introduction of Sidewalk Labs)

About Waterfront Toronto

Waterfront Toronto was created by the three levels of government to act as a catalyst and steward for the revitalization of Toronto's waterfront. Early in its existence, the organization identified ambitious goals, setting high standards for innovation in environmental sustainability, urban design, public realm design, and affordability. Guided by these goals, Waterfront Toronto helped shape the transformation of areas like the West Don Lands, East Bayfront, Queen's Quay, and more.

About Quayside and finding an "Innovation and Development Partner"

Waterfront Toronto owns a large part of a 12-acre parcel of land at the eastern edge of the central waterfront called Quayside. In 2017, looking to once again raise the bar for innovation in city building, Waterfront Toronto issued a Request for Proposals seeking an "Innovation and Development Partner" for Quayside. The Request for Proposals asked private companies to propose how the area could be redeveloped through the most cutting edge, innovative thinking in city building.

About Sidewalk Labs

Sidewalk Labs, an Alphabet company and sister company to Google, responded and was awarded the right to develop a plan for Quayside. The Sidewalk Labs proposal included ideas that were familiar — high-quality public spaces, a focus on public transit, walking, and cycling — and ideas that were unique, most notably the integration of a "digital layer" aimed at making Quayside a "smart" community.

About the Plan Development Agreement (PDA)

Waterfront Toronto and Sidewalk Labs created a Planned Development Agreement *(PDA)* (PDA) to guide their working relationship, including roles and responsibilities related to developing the plan for Quayside.

About the MIDP

Sidewalk Labs has been working on a Master Innovation and Development Plan (MIDP) plan for Quayside that will ultimately be submitted to Waterfront Toronto's Board of Directors for review and potential approval.

Waterfront Toronto has been developing a framework to evaluate the MIDP. If the Waterfront Toronto Board approves the MIDP, Sidewalk Labs will move into detailed planning and development. If the Board does not approve the Plan, Waterfront Toronto will revisit its planning process for Quayside.

INSERT TIMELINE/PROCESS GRAPHIC

Quayside from RFP through to MIDP submission to WT Board, including public consultation milestones (could include PDA and MIDP here as call-out boxes rather than above….)

CONFIDENTIAL DRAFT

What smart cities can do

Smart cities apply a digital layer to entire neighbourhoods, offering a range of urban services like weather protection (e.g. awnings that extend when sensors recognize that it's raining), more responsive transit service (if sensors recognize a group of people is waiting at a transit stop), landscaping (such as triggering sprinklers if it hasn't rained or if sensors read that soil is dry), and more. Smart community advocates say that data is another utility — like water or electricity — that can help improve urban life.

We can use our smartphones and smart thermostats as examples of products familiar to us – they both use the internet and data – to better understand smart cities. If we want to receive "smart" services, users must accept terms of service and consent to sharing information with the product and company that makes it.

Many people accept these terms, excited to receive the benefits the products offer (though they may not understand or pay close attention to these terms); others do not, concerned about the amount of information the private company could collect about them, how secure the information is, and what other uses the company may have with the data. The table below breaks this down a little to highlight opportunities and concerns.

What the product is	Example of service enabled by the digital layer	How it works	Example of what gets people excited	Example of what concerns people
Smart thermostats	Automatic temperature control based on a user's location	A user gives the thermostat permission to monitor their location using their smartphone and modifies the temperature based on their movements.	The thermostat monitors when the user leaves work and turns the furnace on to make sure the space is comfortable, saving money, energy, and reducing environmental footprints from energy use.	The company that makes the thermostat collects and stores data about the user's location, which could be used for things other than controlling the house's temperature.
Smartphone	Navigation services	A user gives the phone and an application permission see their location and destination. The application helps the user navigate to their destination.	The smartphone and application can read traffic patterns in real-time and help them find the most efficient route to their destination, saving them time.	Private companies amass large datasets about public traffic patterns and then sell it to local governments to inform transportation planning, charging taxpayers to receive benefits from public data.

Individual choice is different than community choice

A key difference from products like smart thermostats — where individuals make choices (informed or not) about what they are willing to share with companies in exchange for their services — is that, in smart communities, the digital layer has an influence on shared, *public* assets. Issues such as what information is collected, how secure it is, what other uses companies may have for the data, or whether the data should be collected or used *at all* do not just impact on individuals that choose to opt-in; they impact *everyone* that might enter or otherwise use the smart community. While many people are comfortable accepting the terms of service associated with smart services, many people are not.

While Sidewalk Labs has not yet proposed specific smart community products or services for Quayside, the digital layer that enables them is foundational to their proposal. Just like with smart products, the opportunities and risks the digital layer present for Quayside (and beyond) are raising both excitement and concern. As the public institution responsible for deciding on whether to proceed with Sidewalk Labs' plan for Quayside, Waterfront Toronto needs to make sure it is considering many competing needs, priorities, wants, and perspectives in its evaluation of the key issues related to the digital layer MIDP.

Key issues related to the digital layer and smart communities

In consultations and conversations about Quayside to date, a number of key issues have emerged: digital governance, data collection and use, and algorithms. This Info Sheets #2, #3, and #4 look at each of these topics in more detail. Below are some highlights:

Info Sheet #2: Digital governance
Digital governance refers to the public policies and legal frameworks that regulate how individuals, governments, and corporations can collect, access, store, and use digital information and data. These policies and frameworks are important tools that governments use when striving to serve and protect the public interest as digital products and services become more integrated in people's private and public lives.

People are excited about digital governance because they see the Quayside proposal as initiating a new frontier in public policy. People are worried about digital governance because they see Canada, Ontario, and Toronto's current laws as being outdated an unable to serve a public interest.

Info Sheet #3: Data collection and use
Data collection and use refer to the kinds of data that could be collected in smart communities. Beyond environmental data (such as the temperature, current weather conditions, number of parking spots occupied by cars, etc.), there is also personal data (who is in the community, how much time did they spend there, what did they just throw into the garbage).

People are excited about data collection and use because they it is being necessary to providing new services that can improve urban life, reduce the costs associated with service delivery, and reduce environmental footprints. People are concerned about data collection and use because they worry about issues like privacy, racial profiling, surveillance, and the privatization of public data.

Info Sheet #4: Algorithms
Algorithms refer to the computer programs or formula that enable smart city services. Despite being machine-driven, algorithms are not un-biased: they reflect the priorities, biases, and perspectives of the people that program them.

People are excited about algorithms because they offer the opportunity to "automate" communities, providing better, more responsive services to residents. People are concerned about algorithms because they may not take a broader range of perspectives, priorities, or a broader public interest into consideration.

What do you think?

Waterfront Toronto will be reviewing the Master Innovation and Development Plan that will be submitted by Sidewalk Labs and will need to evaluate that MIDP and determine how well it reflects the public interest. Our questions for you:

1. What other key issues would you like to see Waterfront Toronto consider as they review the digital layer proposals related to Quayside?
2. How do you think Waterfront Toronto can best determine what's in the public interest when dealing with the opportunities and challenges that come along with smart cities?
3. Do you have any other feedback or advice related to smart cities that you'd like to share with Waterfront Toronto at this time?

You can provide this feedback on December 8th at the upcoming Public Roundtable and/or by emailing us directly at [INSERT EMAIL] with a written submission. **Please send your thoughts by December 21, 2018** so that we can feed them into our decisions making process. A summary of all written feedback received will be shared publicly early in early 2019.

In addition to the Quayside Civic Labs Info Sheet series, there are a wealth of resources available online reflecting the range of perspectives and ideas that are being discussed around the world related to smart cities. We've highlighted only a few here to get you started:

Civic Tech Toronto www.civictech.ca Cities for Digital Rights www.citiesfordigitalrights.org
Open North www.opennorth.ca Centre for International Governance Innovation (CIGI) www.cigionline.org
Sidewalk Labs (SWL) www.sidewalklabs.com Office of the Privacy Commissioner of Canada www.priv.gc.ca
City of Toronto Chief www.toronto.ca Province of Ontario www.ontario.ca

There are many public opportunities to learn more about the more traditional city-building elements being considered at Quayside, whether that be roads or buildings, parks or waste management, or housing and public realm. ***Visit the Waterfront Toronto website to learn more: www.waterfrontoronto.ca***

QUAYSIDE CIVIC LABS

Digital Governance

2

The Quayside Civic Labs Info Sheet Series

This is the second in a series of Info Sheets that Waterfront Toronto has developed to support a meaningful public discussion about the potential future of Quayside – specifically, its digital future.

What does that mean exactly? Info Sheet #1 explains some of the ways and places that technology can influence a city. Info Sheets 2, 3, and 4 go into more detail on Digital Governance, Data Collection and Use (including data residency and privacy), and Algorithms.

What is digital governance?

Digital governance refers to the public policies and legal frameworks that regulate how individuals, governments, and corporations can collect, access, store, and use digital information and data. These policies and frameworks are important tools that governments use when striving to serve and protect the public interest as digital products and services become more integrated in people's private and public lives.

In recent years, governments across the world have been developing new regulatory frameworks to respond to the unprecedented amount of data that private companies have been amassing about individuals: contact information, relationships, movements, political beliefs, communications, and much more. While many of these products and services enable exciting services that were impossible a decade ago, the collection, storage, and use of data by private companies has also been linked to issues like privacy breaches, surveillance, racial profiling, the spread of misinformation, and others.

Waterfront Toronto is working closely with leaders in the legal field and in government, as well as their Digital Strategy Advisory Panel (DSAP – find more info here INSERT LINK), to ensure that a current and comprehensive understanding of relevant laws informs the review of all proposals related to Quayside.

Read on to find out what feedback Waterfront Toronto needs from you. Also please visit our website (www.waterfrontoronto.ca) or join us on December 8, 2018 at the 4th Quayside Public Roundtable (see back page for more details).

Relevant Law in Canada

Digital governance policies and laws strive to enable and support the best that these new products and services can provide while minimizing the negative consequences. In terms of anything that Sidewalk Labs will propose for Quayside, these are the primary legal frameworks that currently apply and that Waterfront Toronto will rely on when reviewing the MIDP.

Applicable legislation in Canada includes (but isn't limited to):

Canadian Charter of Rights and Freedoms
INSERT SHORT DESCRIPTION + EXAMPLE OF RELEVANCE

Personal Information Protection and Electronic Documents Act (PIPEDA) (Canada) – 2001
INSERT SHORT DESCRIPTION + EXAMPLE OF RELEVANCE

Privacy Act (Canada)
INSERT SHORT DESCRIPTION + EXAMPLE OF RELEVANCE

Municipal Freedom of Information and Protection of Privacy Act (Ontario)
INSERT SHORT DESCRIPTION + EXAMPLE OF RELEVANCE

Freedom of Information and Protection of Privacy Act (Ontario)
INSERT SHORT DESCRIPTION + EXAMPLE OF RELEVANCE

CONFIDENTIAL DRAFT

Quick Look at Digital Governance Issues

To date, a number of digital governance issues have come up in discussions around Quayside. The table below provides a high-level summary these issues, the spectrum of opinions about them, and how they connect to Sidewalk Labs (SWL) proposal and Waterfront Toronto's evaluation of the proposal.

Key issues of interest	What is the spectrum of opinions?	What has SWL proposed?
INFO SHEET 3: **Data collection and use** refers to the collection, storage, and usage of urban data.		
Data storage. Is it necessary to collect and store data at all?	Some feel that data collection and storage are essential to provide smart city services. Others are concerned about private companies amassing data and feel that good services can be provided without storing data at all.	Insert
Data residency In which country does data collected in a smart city reside? Whose laws apply to the data that's collected? How could those laws influence my life?	Some feel that it doesn't matter where data resides; it's most important that there's redundancy to ensure data is always available. Others are concerned that data is subject to the laws of the countries in which it resides, and different countries have different standards for respecting privacy.	Insert
Consent How do I give (or deny) consent to sharing data or being tracked in a smart city?	Some feel that consent is not required since urban data is a public asset; others feel that, given the potential for private companies to collect data, consent is required.	Insert
INFO SHEET 4: **Algorithms** are the set of instructions given to a computer program to do a certain task.	Some feel that algorithms are key to providing better, more efficient services; others are concerned that algorithms can reflect a bias that can ignore or marginalize some people.	Insert

What do you think?

Waterfront Toronto will be reviewing the Master Innovation and Development Plan that will be submitted by Sidewalk Labs and will need to evaluate that MIDP and determine how well it reflects the public interest. Our question for you:

1. What other key issues would you like to see Waterfront Toronto consider as they review the digital layer proposals related to Quayside?
2. How do you think Waterfront Toronto can best determine what's in the public interest when dealing with the opportunities and challenges that come along with smart cities?
3. Do you have any other feedback or advice related to smart cities that you'd like to share with Waterfront Toronto at this time?

You can provide this feedback on December 8th at the upcoming Public Roundtable and/or by emailing us directly at [INSERT EMAIL] with a written submission. **Please send your thoughts by December 21, 2018** so that we can feed them into our decisions making process. A summary of all written feedback received will be shared publicly early in early 2019.

There are many public opportunities to learn more about the more traditional city-building elements being considered at Quayside, whether that be roads or buildings, parks or waste management, or housing and public realm. ***Visit the Waterfront Toronto website to learn more: www.waterfrontoronto.ca***

[Waterfront Toronto Logo]

QUAYSIDE CIVIC LABS

Data Collection & Use

3

The Quayside Civic Labs Info Sheet Series

This is the third in a series of Info Sheets that Waterfront Toronto has developed to support a meaningful public discussion about the potential future of Quayside – specifically, its digital future.

What does that mean exactly? Info Sheet #1 explains some of the ways and places that technology can influence a city. Info Sheets 2 and 4 go into more detail on Digital Governance and Algorithms.

What is data collection & use?

Urban data has been a useful tool for cities for centuries. Why? Because it can help people make **more informed decisions**. For example: if there are ten cars waiting at an intersection and zero cars going in the other direction, this could be a good time to change the light. If planners know the number of cars waiting at a traffic light relative to the number of cars going the other way, they can make informed decisions going forward. This same logic can be used for pedestrian crossings, bike crossings, etc.

But just as the collection and use of urban data presents opportunities, it also presents questions and concerns. How do we collect and use data responsibly? Is the storage of data absolutely essential to providing these services? How do policy makers and residents engage in a meaningful dialog about data collection and usage? Where should data be stored? How should it be stored? Who should have access to it? Simply, what should be collected and what shouldn't be? How do we do what's best for **everyone**?

Read on to find out what feedback Waterfront Toronto needs from you. Also please visit our website (www.waterfrontoronto.ca) or join us on December 8, 2018 at the 4th Quayside Public Roundtable (see back page for more details).

Example of Public Data Collection and Use by a Municipal Government

The notice at right is from a public meeting in Markham on December 10, 2017. It provides a public notice of data collection and use, as required by legislation. It also provides an opt-out policy.

Photo credit: Jacky Li



What is data storage and residency? How does it impact me?

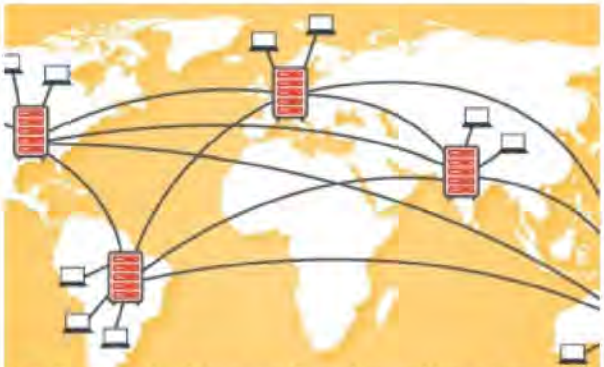
In order to make data driven decisions, the data must first be collected. Some service providers say that data must also be stored so that they can train the software that provides smart city services. The term data residency refers to the **physical or geographic location** of an organization's data or information i.e. where the data is stored. The graphic on the right gives a conceptual idea of how this works.

Regulatory Requirements

Data residency also influences the regulatory requirements imposed on data storage based on the country or region in which it resides. For example, if you live in Toronto but have a smartphone built by an American company and its services store data on an American computer, what standards is that company held to? Are they responsible for meeting Canadian or American regulation? Are they obliged to store that data in Canada?

Different Perspectives

Data residency is important because we want to know who is collecting our data, what they are using it for, and what standards they are being held to. Some say that, given how important data is to the digital economy, data collection has become a fact of life. Others find it concerning that government organizations and private companies might collect and store information about us and do not believe data needs to be stored to provide certain services. In either case, regulations around data residency exist to hold those that wish to collect and store our data accountable.



http://www.boblandstrom.com/how-data-residency-laws-differ-between-europe-and-the-usa/

In Toronto, there are several legal frameworks that govern data collection, usage, and storage. For example, **the Personal Information Protection and Electronic Documents Act** (PIPEDA) governs how private sector organizations collect, use and disclose personal information in the course of commercial business. PIPEDA specifies the rules concerning collection, use, or disclosure of the personal information in the course of recognizing the right of privacy of individuals with respect to their personal information. It also specifies the rules for the organizations to collect, use, and disclose personal information. In the fast-paced environment of the digital economy, however, holding data collectors accountable purely through regulation can be tricky. The public has to be informed and engaged in order to make sure that they are protected.

What do you think?

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[Waterfront Toronto logo]

QUAYSIDE CIVIC LABS

Algorithms

4

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What does that mean exactly? Info Sheet 1 explains some of the ways and places that technology can influence a city. Info Sheets 2 and 3 go into more detail on Digital Governance and Data Collection and Use.

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What are algorithms?

In 2017, the UK House of Commons Science and Technology Committee conducted an inquiry into the use of algorithms in decision-making. The Royal Academy of Engineering explained that:

"An algorithm is simply a set of instructions that can be understood by a computer to solve a problem or complete a task. However, the increasing availability of data, and accessibility of computers with significant processing power, has influenced the development of new algorithms to help predict behaviour and automate decisions. This has opened up many novel applications with the aim of increasing productivity, and enabling more efficient and informed decision-making in government, businesses and public bodies."

Canada is also thinking about algorithms. A recent report highlighted that:

"Algorithms have the potential to dramatically improve the provision of services, administrative processes, sharing of data, and the evidence base for decision-making. However, such processes can reflect human biases and present accountability challenges. Given the scale of government operations, algorithms could result in systems that implement biased or opaque decisions on a previously unimaginable scale and could undermine a citizen's right to procedural fairness."

From Open and Transparent Government, the work of a sub-group of new public services who participated in Canada Beyond 150, a professional development program co-championed by the Privy Council Office and Policy Horizons Canada
http://canadabeyond150.ca/assets/reports/OTG%20-%20EN.pdf

The key messages from the Royal Academy of Engineering to the UK House of Commons Science and Technology Committee were as follows:

- Artificial intelligence will become pervasive in most, if not all, aspects of decision-making in the foreseeable future. The Royal Academy of Engineering would welcome continued support by government to ensure the ethical and accountable use of algorithms in decision-making.
- There are many different types of algorithms, with differing functions, and associated issues of bias and transparency. Ongoing dialogue with the public by government, supported by businesses and public bodies, will be essential for public acceptance and trust of the use of algorithms in decision-making.
- Algorithms are not inherently biased, algorithmic decisions depend on a number of factors, including how the software is deployed, and the quality and representativeness of the underlying data. It will be important to ensure that data transparency, review and remediation is taken into account throughout algorithmic engineering processes.
- Government, businesses and public bodies will need to consider their use of algorithms in decision-making, consulting widely, and ensuring that mechanisms are in place to detect and address any mistakes or unintended consequences of decisions made.

www.raeng.org.uk/publications/responses/algorithms-in-decision-making

CONFIDENTIAL DRAFT

Key issues related to algorithms in Smart Cities

Algorithmic bias, public interest, and public values
Imagine a situation where the algorithm that determines a self-driving car's behaviour has to make a decision about how to manage a collision. In this situation, the algorithm can decide to protect one group of people (the car's passengers) or another (a group of pedestrians on a sidewalk), but not both. How does it decide? What variables does it take into consideration? Do those variables reflect a set of principles and values that were the result of public deliberation? Or do they reflect the priorities of the private company that developed the car and wrote the algorithms? There are other examples, too. How does a smart city respond if it senses that a group of people is gathering in public protest? What action does the smart city take if sees illegal activity happening? The degree to which public interest and values are reflected in algorithmic decisions is a key issue in Smart Cities.

{this space saved for another example or an illustration}

CONFIDENTIAL DRAFT

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Minister of
Innovation, Science and
Economic Development

Ministre de
l'Innovation, des Sciences et du
Développement économique

Ottawa, Canada K1A 0H5

Mr. Bob Zimmer, M.P.
Chair
Standing Committee on Access to Information, Privacy and Ethics
House of Commons
Ottawa, Ontario K1A 0A6

Dear Colleague:

Pursuant to Standing Order 109 of the House of Commons, I am pleased to respond on behalf of the Government of Canada to the report of the Standing Committee on Access to Information, Privacy and Ethics entitled *Towards Privacy by Design: Review of the* Personal Information Protection and Electronic Documents Act.

The Government of Canada extends its gratitude to the members of the Committee for their comprehensive review of the *Personal Information Protection and Electronic Documents Act* (PIPEDA). The Committee's recommendations provide valuable guidance as the government continues its commitment to protecting Canadians' right to the privacy of their personal information in a manner that also recognizes the needs of organizations to collect, use, or disclose personal information for reasonable purposes.

The government would also like to express its appreciation to the Office of the Privacy Commissioner of Canada (OPC), as well as to the numerous stakeholders, businesses, consumer advocates, and experts who appeared before the Committee as witnesses for this important study. The views voiced by these individuals and organizations provide valuable insight into the impacts of marketplace and technological changes on the application of the PIPEDA.

The management and use of personal information are crucial to the conduct of business, trade, and commerce in a modern and data-driven global economy. Nonetheless, the protection of privacy remains a fundamental value and concern for Canadians.

Overall, the Government of Canada shares the Committee's view that changes are required to our privacy regime to ensure that rules for the use of personal information in a commercial context are clear and enforceable and will support the level of privacy protection that Canadians expect.

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These issues are complex, and ensuring that Canada can fuel innovation while also fostering trust and adoption by Canadians will require discussion and thoughtful consideration. While the Committee heard from a broad range of organizations, the government must further this dialogue with Canadians to take this important work to its next step. It will be critical to have a broader and deeper dialogue with Canadians, particularly as we approach any legislative amendments, and to ensure that the PIPEDA maintains its intended balance.

On April 18, 2018, the government announced regulations that will implement mandatory data breach reporting under the PIPEDA. This is a critical step in providing Canadians with the assurance that they will be informed about any risks to the distribution of their personal information while also ensuring there are meaningful penalties when appropriate steps are not taken in the event of a breach.

The next step will be to engage Canadians in a national conversation on data and digital issues, including not only how disruptive technologies can fuel innovation, but also how necessary safeguards, including privacy, must be in place for Canadians to trust, adopt, and be included in the data economy. This effort will need to explore how Canada can lead and succeed in a data and digitally driven economy while ensuring continued respect for individual rights.

To this end, please find below the Government of Canada's response to the Committee's report, grouped according to the following themes:

- Consent under the PIPEDA
- Online Reputation
- Enforcement Powers of the Privacy Commissioner
- Impact of the European Union (EU) *General Data Protection Regulation* (GDPR)

Consent under the PIPEDA
(Pertaining to recommendations 1, 2, 4, 5, 6, 8, and 9)

The Government of Canada agrees with the Committee that consent should remain a core element of the PIPEDA. As noted in the Commissioner's most recent annual report to Parliament, consent provides individuals with control over how their personal information is shared and thereby provides a means to protect one's privacy.

The PIPEDA, as with most progressive privacy regimes, places great value on consent. Canada's legal framework for privacy protection includes federal, provincial, and even municipal privacy laws that are based on the foundation of consent. At the federal level,

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this framework includes two statutes: the *Privacy Act*, which governs the collection, use, and disclosure of personal information by government institutions, and the PIPEDA, which provides the basic legal framework for the private sector.

Maintaining a progressive view of consent also helps ensure that Canada remains aligned with internationally recognized standards. Interoperability of privacy regimes, in turn, facilitates digital trade and the emergence of a strong global digital economy.

The government also agrees that work is needed to ensure that consent remains meaningful under the PIPEDA and concurs with the view of the Committee and other stakeholders that the consent regime can be enhanced and clarified by a variety of means. Consultations on consent, conducted by the OPC, have resulted in a wide range of proposals to do so. Further examination of the viability of these options, incorporating all viewpoints, is a necessary next step. A key consideration when examining options is the need for continued applicability of the PIPEDA across all sectors of the economy.

There is a widespread acknowledgment that the principles-based approach to the PIPEDA has been a source of the Act's strength and resilience to date. The government is committed to maintaining this. For example, the Committee recommended expanding the scope of the existing exception to consent for the disclosure of personal information related to the prevention of activities pertaining to financial crime. While the objective of combatting financial crime is laudable, any expansion of existing exceptions to the consent provisions that appear to focus on a particular sector will need to be carefully studied to ensure that all stakeholders' views are taken into account and that the principles-based approach is maintained. As the number of sectors that rely on data expands, the desire for sector-specific or technology-specific approaches will grow. The government is committed to a robust and meaningful PIPEDA based on core principles, recognizing that more specific guidelines or regulations may need to be articulated for new or emerging business models or products.

Recent incidents in the public eye involving unintended uses of personal information obtained from social media have drawn attention to the risks of unconstrained access to individuals' personal information. They highlight the need to closely study the potential impacts of redefining "publicly available" information for the purpose of the PIPEDA. This issue is particularly acute as it pertains to minors' information, given their greater propensity to use social media and willingly disclose their personal information, which raises particular vulnerabilities.

The government notes the Committee's recommendation to provide specific rules that apply to the collection and use of minors' information. The protection of minors online was a central issue during the first statutory review of the PIPEDA, which resulted in

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amendments to the PIPEDA's consent requirements such that consent can only be considered valid if the individual providing it can understand the nature and consequences of providing that consent. This amendment was aimed at prohibiting the deceptive collection of a child's personal information. The issue of applying explicit protections for minors under federal law presents unique challenges as it inherently involves the definition of a minor, which falls within provincial jurisdiction.

Online Reputation and Respect for Privacy
(Pertaining to recommendations 11, 12, and 13)

The Government of Canada acknowledges public concerns about the accumulation of personal information online and concurs with the Committee that it poses a risk to privacy protection in general. There is a widespread acknowledgment that this risk is elevated for young people, who are known to disclose vast amounts of their personal information online while potentially being unable or less able to thoroughly comprehend the potential impacts on their future of doing so.

The government also acknowledges the work being undertaken by the OPC in this area, in particular, the draft position on Online Reputation that suggests that the PIPEDA currently provides for a right to de-indexing. It is noteworthy that the OPC paper acknowledges that there are legitimate concerns about the impacts of this position on other rights, namely the right to the freedom of expression. For this reason, the OPC has called for further study to ensure that the appropriate balance between these competing rights is met.

Public commentary highlights the divergent views on these matters among stakeholders. With this in mind, it seems that providing further certainty on how the PIPEDA applies in the various contexts presented by the Committee will be necessary to ensure a level playing field. The findings of the OPC based on responses to its draft position will inform the development of a proposal on the need for and approach to legislative changes in this area.

Given the potential far-reaching impacts of a right to erasure and right to de-indexing in numerous areas, including freedom of speech and the public record, and given that the PIPEDA only applies to commercial contexts involving personal information, the government would need to assess whether the PIPEDA would be the most appropriate statutory instrument for addressing these issues.

Finally, the government agrees, in principle, that appropriate destruction of information when it is no longer needed for its intended purpose is key to preventing unintended future uses of personal information, possibly leading to reputational harm. This issue was

...5

the subject of discussion at a previous Parliamentary review of the PIPEDA and resulted in the development of clear guidance from the OPC for organizations on how to properly destroy information in accordance with Principle 5 of the Act.

Enforcement Powers of the Privacy Commissioner
(Pertaining to recommendations 15 and 16)

The Government of Canada agrees with the Committee that the time has come to closely examine how the PIPEDA's enforcement model can be improved to ensure that the PIPEDA meets its objective of supporting innovation and the growth of the digital economy while providing robust protections for personal privacy.

It is noteworthy that similar recommendations were made by the Senate Standing Committee on Transport and Communications in a report following its study of connected and automated vehicles. The report, entitled *Driving Change: Technology and the future of the automated vehicle*, called for changes to the PIPEDA to empower the OPC to "proactively investigate and enforce industry compliance" with the Act.

In particular, the Senate report echoes calls by the Committee to provide the Privacy Commissioner with the appropriate powers and tools to ensure that connected and automated vehicles are compliant with the PIPEDA's requirements, particularly in regard to obtaining consent for the collection and use of drivers' and passengers' personal information.

To determine the optimal model for compliance and enforcement, the government must assess the viability of all options to strengthen the compliance and enforcement regime of the Act.

As part of this assessment, the government must look at other models of compliance and enforcement as options and must consider the potential impacts of these models on the overall mandate of the OPC, the principles of fundamental justice, and the countervailing risks associated with increased enforcement powers, notably the impacts on open dialogue between businesses and the OPC.

Options for change must also be assessed in the context of other potential changes to the PIPEDA, including those pertaining to consent. Changes to the Act's enforcement model may have an impact on the need for changes to other areas, and the reverse may also be true.

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The government intends to undertake further study of the full range of options for ensuring compliance with the PIPEDA, with a view to presenting Canadians with proposals that will enhance personal privacy and support innovation in an era of rapid technological change and evolution in the use of data.

Impact of the European Union (EU) *General Data Protection Regulation* (GDPR)

(i) Canada's Adequacy Status
(Pertaining to recommendations 17, 18, and 19)

The Government of Canada supports these recommendations. Data flows are a significant enabler in growing a digital economy, yet privacy regimes differ across countries. The key is to work towards harmonization of the different frameworks to ensure that the level of data protection is equivalent in different jurisdictions, rather than developing a single set of global rules. That is why the government is engaged with trade partners, including the EU nations and institutions, in the discussion of cross-border data transfers and interoperability of privacy regimes.

Using a cross-government approach, officials are working closely with the European Commission to understand the requirements for maintaining Canada's adequacy standing under the EU GDPR. Our standing will continue with the implementation of the regulations, but a review can be expected by 2020. Using existing mechanisms for engagement and collaboration, the government aims to maintain a dialogue with the provincial and territorial governments to ensure a broad understanding of federal engagement activities with the European Commission and specific impacts related to an eventual adequacy review.

The Committee's study has made a significant contribution to this work by providing the government with recommendations for ensuring the continued effectiveness of the PIPEDA in light of international developments.

(ii) New Rights to Align with GDPR
(Pertaining to recommendations 3, 7, 10, and 14)

A number of the Committee recommendations pertain to aligning the PIPEDA with specific provisions of the GDPR and stem largely from witness testimony about the importance of retaining Canada's adequacy status.

In recognition of the importance of interoperability of privacy regimes, the EU has adopted the concept of "essential equivalence" in the GDPR to examine the adequacy of non-member regimes, rather than one-to-one mapping. Therefore, it is not clear that

...7

the PIPEDA's requirements must reflect each of the GDPR's rights and protections to maintain its adequacy standing.

At the same time, the government agrees that concepts at the heart of these recommendations—such as algorithmic transparency, privacy by design, depersonalized data, and data portability—hold promise for enhancing privacy protection and supporting innovation. With this in mind, the government will consult broadly on the potential benefits and impacts of incorporating these concepts into Canada's privacy framework, with a view to addressing domestic priorities.

Moving forward, the Government of Canada will engage Canadians in a conversation on how to make Canada a more data-savvy society. There will be a focus, in particular, on how companies can gather, use, and share personal information to innovate and compete while at the same time protecting privacy—a value that Canadians continue to hold dear.

Once again, I would like to thank the Committee on the behalf of the Government of Canada for its thorough and careful examination of these important issues.

Sincerely,



The Honourable Navdeep Bains, P.C., M.P.

BACKGROUND

Statistics Canada's data collection from financial institutions

- On October 26, 2018 the media reported on plans by Statistics Canada to implement a project that would involve the collection of personal financial data of 500,000 Canadian dwellings, directly from Canadian banks, and without the consent of individuals.

- The project is designed to address the growing challenges with traditional data gathering methods for the purpose of accurately measuring Canada's economy and societal changes. The collection of the information is to be carried out under Section 13 of the *Statistics Act* which authorizes the Chief Statistician to compel the disclosure of, and obtain, any documents or records that are maintained by any organization, from which information is sought in respect of the objectives of the Act.

- Despite this, the initiative has been characterized in the media as unnecessarily privacy invasive: "…a massive new personal information bank with the real-time financial transaction data of hundreds of thousands of Canadians without their knowledge".

- This tensions also illustrate some of the asymmetries between the public sector *Privacy Act*, which is based on legal authority to collect and use personal information and the private sector *Personal Information Protection and Electronic Documents Act*, which is based on individual consent for collection and use of personal data.

- Statistics Canada had engaged both the Privacy Commissioner of Canada as well as the major financial institutions in the development of the pilot project. The collection of the data would begin in January 2019.

- On October 26th, news media began to report on the project and characterizing Statistics Canada plans as seeking to: "…build a massive new personal information bank with the real-time financial transaction data of hundreds of thousands of Canadian"…without their knowledge. In an official statement, the Canadian Bankers Association noted: "Banks believed this proposed data acquisition project was still in the exploratory stages..."

- On October 31st, the Privacy Commissioner announced that his Office will be looking into the collection of personal information from private sector organizations by Statistics Canada.

- On November 4th, news media reports began exploring the possible impact of the data collection by Statistics Canada on trade. The Canadian Chamber of Commerce noted concerns that the requirement for banks to provide data may raise questions as to Canada's privacy protection standing with the European Union (EU). More specifically, since 2001, PIPEDA has been deemed as providing an adequate level of privacy protection by the EU thereby enabling data flows between the EU organizations and Canada.

- Canada has been working closely with the EU with a view to ensuring the continuity of adequacy status. To this end, Canada has been providing regular reports to the EU outlining developments in

Canada's privacy and data protection regime to assist the European Commission in its monitoring obligation of Canada's adequacy status.

- It is expected that Canada's adequacy status will be assessed by the European Commission prior to May 2020. An adequacy determination is only one of the mechanisms that are available to organizations in the EU to transfer data to organizations outside of the EU.

KEY MESSAGES – (Responsive)

The Government of Canada is committed to ensuring the protection and security of Canadians' personal information.

The government also recognizes that the potential of a data driven economy will only be fully realized when Canadians' have trust that their data and privacy is well protected.

PIPEDA recognizes circumstances where personal information may be disclosed to a government institution in order to administer a law of Canada.

The Statistics Act of Canada provides legal authority for data collection and the use of the data is strictly for statistical purposes and subject to strong legislative protections.

I understand that the Privacy Commissioner of Canada is currently investigating these matters.

Canada's EU Adequacy Status

- The new General Data Protection Regulation (GDPR) which came into force on May 25, 2018 serves to strengthen and unify data protection for individuals within the EU by establishing a single law. It also addresses the transfer of personal data outside the EU.
- The EU recognized the *Personal Information Protection and Electronic Documents Act* (PIPEDA) as providing adequate privacy protection in 2001 (reaffirmed in 2006), permitting transfers of information about EU citizens to companies in Canada without the need for additional safeguards.
- The adequacy decision allows for information about EU citizens to flow freely between Canada and EU Member States without the need for Canadian firms to individually demonstrate compliance with the Directive (or the new GDPR) or enter into bilateral contracts.
- In October 2015, the Court of Justice of the European Union ruled in the Schrems decision that the privacy protection of European citizens is undermined by national security surveillance practices in foreign countries. One consequence of the Schrems case was the adoption of Implementing Decision (EU) 2016/2295 in December 2016. The Implementing Decision amends various elements of existing adequacy decisions, including Canada's, and places a new monitoring obligation on the European Commission (EC).
- The EC must now monitor existing adequacy decisions to determine if there have been developments in that country that could affect the functioning of the decision. The monitoring obligation applies to adequacy decisions granted under the existing EU Data Protection Directive and will also be a requirement under the new GDPR. To assist them in this new monitoring obligation, the EC has requested that Canada provide ongoing information on developments related to its data protection framework, with a particular focus on access to personal information by public authorities for law enforcement and national security purposes.
- Since the monitoring obligation extends beyond the scope of Canada's first EU adequacy decision to include data protection frameworks applicable to government institutions (i.e. the *Privacy Act*) and access to personal information by public authorities, Canada has been provided with insights into the expected scope of future monitoring under the new GDPR.
- Recognizing this broader scope, ISED has established an interdepartmental Advisory Group on Privacy Interoperability (AGPI) to provide assistance and advice in responding to EC requests for information. The AGPI continues to meet and engage the EC on regular basis.

KEY MESSAGES

The General Data Protection Regulation (GDPR) is a new law which brings a single system of privacy regulation to the EU.

Along with new privacy protections, the GDPR's territorial scope extends to any organization outside the EU that is offering goods or services to individuals located in the EU.

This means that organizations worldwide will need to assess whether the GDPR applies to them and if it does, take the necessary measures to ensure they are compliant.

With respect to data transfers, Canada's the EU recognizes Canada's regime as providing "adequate" privacy protection.

We continue to work with the European Commission to ensure the continuity of this status under the GDPR which means that Canadian companies subject to the Personal Information Protection and Electronic Documents Act (PIPEDA) can continue to accept data transfers from EU organizations.

Sidewalk Toronto

- On October 17,2017 the Government announced that Sidewalk Labs, an offshoot of Google's parent company Alphabet, won a Waterfront Toronto competition to initiate a conversation about building Toronto's east waterfront into a futuristic model for cities around the world. Waterfront Toronto and Sidewalk Labs unveiled its plans for Quayside, a 12-acre site at Queens Quay East and Parliament Street.

- While Sidewalk Labs has committed to integrate security and privacy protection into the new infrastructure, many stakeholders have raised concerns over the data collected and the related issues of data ownership and degree to which the derived benefits from the data will be shared.

- Recently Sidewalk Toronto unveiled a plan for governance of the data which will be collected within the new community, including the proposed use of a "data trust" to ensure the protection of privacy. However, several privacy advocates have criticized the proposal and have called for plans to be put on hold until concerns about data access and use have been addressed. Of note, several Sidewalk Toronto advisory board members have resigned in protest over concerns pertaining to transparency and commitment around digital governance issues.

- On November 22nd Sidewalk Toronto will be holding a "Civic Lab on Digital Governance".

KEY MESSAGES

PIPEDA provides a balance between privacy and other important public policy objectives, such as innovation.

PIPEDA applies regardless of the context in which personal information is collected including in the context of smart cities, including where data flows across provincial or international borders or where there is no substantially similar legislation to PIPEDA at the provincial level.

Companies operating in Canada must abide by the principles outlined in PIPEDA which include openness about privacy practices and ensuring adequate security safeguards are in place to protect the personal information.

National Digital and Data Consultations

- In June 2018 Minister Bains launched the National Digital and Data Consultations with the goal of better understanding how Canada can drive digital innovation, prepare Canadians for the future of work, and ensure they have trust and confidence in how their data is used.
- Over the following four-month period more than 550 Canadians provided comments and ideas on digital and data transformation and how to harness its power for the benefit of all through an interactive web site Canadians shared more than 1,900 ideas.
- Ministers Bains conducted a series of round-table discussions, along with a selected group of Digital Innovation Leaders. Together they hosted 30 discussions across the country between June and September 2018. The leaders reached out to a broad cross-section of society including business leaders, innovators and entrepreneurs, academia, women, youth, Indigenous peoples, provincial and territorial governments, and all Canadians.
- A report on "What we heard" is anticipated to be published by ISED soon.
- Privacy related comments heard over the course of the consultations include:
  - PIPEDA needs to be modernized with calls to balance the desire for enhanced privacy with the capacity for new technologies to stimulate innovation and social and economic value;
  - Updates to PIPEDA must be supported by clear guidance on implementation and applicability;
  - Enhanced enforcement is essential but must be implemented for ease of compliance and room for private-sector solutions as well;
  - Data protection framework must recognize emerging privacy norms, and work coherently with other marketplace frameworks and emerging regulations for particular disruptive technologies and business models, such as open banking;
  - "Data trusts" are seen as a potential model to ensure that data is safe, but also that data is being used in a fair and unbiased way;
  - Canada's data protection framework must be interoperable with EU privacy law, while avoiding the "GDPR mistakes"; and
  - Digital threats including, security breaches, data misuse and manipulation, malware underscore the importance of strong cybersecurity measures for businesses and citizens.

KEY MESSAGES

- The Government of Canada launched a national consultation with Canadians on Digital and Data Transformation.

- The goal is to better understand how Canada can drive innovation, prepare Canadians for the future of work and ensure Canadians have trust and confidence in how their data is used.

- New technologies have transformed the way that we access information, shop, live, socialize and work.

- Digital innovation is essential to growing our economy, attracting investment and creating middle-class jobs for Canadians.

- Our government also recognizes that the potential of a data driven economy must be balanced against Canadians' right to have their data and privacy protected.

- This consultation will build on the Innovation and Skills Plan to benefit Canadians.

SUPPLEMENTARY MESSAGES

- Today, transformational technologies are presenting new opportunities for innovators to create jobs and generate prosperity. We have an opportunity to build a digital legacy for Canada – to leave our mark on the global digital landscape. This engagement is the first step in making that a reality.

Review of PIPEDA

- In February, 2018, the House of Commons Committee on Access to Information, Privacy and Ethics (ETHI) issued a report on an extensive study of PIPEDA conducted by the Committee between February and December 2017. During the course of the study a total of 65 witnesses provided their thoughts on the need for amendments to PIPEDA, including the Privacy Commissioner of Canada, the European Data Protection Supervisor, as well as Michael Geist, Canada Research Chair in Internet and E-Commerce Law and Professor of Law at the University of Ottawa.

- Key issues addressed by the witnesses during their appearance before ETHI included the following:

  – examining the current consent model,

  – investigating whether Canadian privacy law should include a right to be forgotten and/or a right to erasure akin to that prescribed under the European privacy legislation, the General Data Protection Regulation that has come into force since May 25, 2018,

  – determining whether the current ombudsman model should be revised to grant the Privacy Commissioner new enforcement powers, and

  – determining whether the Act should be amended to ensure that Canada maintains its "adequacy" status to allow for cross-jurisdictional data-flow between Canada and the European Union.

- The majority of witnesses supported modifying certain aspects of PIPEDA and a select minority proposed that a complete overhaul is required arguing that its current form is too complex and not easily understood by the average Canadian.

- The ETHI study was not considered a formal statutory review, which has been due since 2011.
Government Response

- The Government Response to the Committee report, tabled in June 2018, noted that while PIPEDA still receives broad support, there is recognition that the status quo is insufficient to meet the evolving needs of an economy that is increasingly driven by disruptive technologies and data.

- It also noted that evidence presented before Committee revealed considerable differences of opinion about how to address the issues raised. It therefore noted the need for continued dialogue with Canadians, as the Government contemplates amendments to the legislative framework for data protection, and pointed to the Digital and Data consultations as the next step.

KEY MESSAGES

- Canada benefits from a strong privacy regime under PIPEDA, which has supported innovation, while also safeguarding Canadians' privacy.
- The Government concurred with the Standing Committee on Access to Information, Privacy, and Ethics that changes are necessary to maintain clear and enforceable rules, and to support the level of privacy protection that Canadians expect.
- These issues are complex, and ongoing engagement with stakeholders will be critical to ensure that any changes to PIPEDA maintain the Act's intended balance.
- Between June and October 2018, the Government engaged Canadians in national consultations on data and digital transformation, which included the area of "Privacy and Trust." We heard from over 550 diverse stakeholders from the private sector and civil society, as well as over 1800 submissions which Canadians provided online.
- ISED will report on insights and ideas provided through consultations in the coming weeks. This will provide valuable input for officials' ongoing work on PIPEDA and other marketplace

Data Breach Reporting

- Parliament amended PIPEDA in June 2015 to create new data breach reporting requirements. This regime came into force on November 1, 2018 after extensive stakeholder consultations.
- Organizations that experience data breach that creates a real risk of significant harm must now notify affected individual and report to he Privacy Commissioner as soon as feasible. Organizations that knowingly fail to comply are subject to fines of up to $100,000 per contravention. Organizations are also required to keep a record of all breaches, for provision to the Privacy Commissioner upon request.
- These new requirements are anticipated to provide valuable insight into the nature and extent of data breaches and cyber security in Canada.
- Canada courts have recognized the extraterritorial application of PIPEDA where organizations' activities have a real and substantial connection to Canada. As such, organizations subject to PIPEDA remain responsible for ensuring the security of information that has been transferred across borders.

KEY MESSAGES

- As of November 1, 2018, PIPEDA requires companies to inform Canadians if their private data has been lost or stolen, and if they have been placed at risk of harm. Companies must also report breaches the Privacy Commissioner.
- Companies that fail to comply with these requirements will face severe financial penalties.
- The introduction of these new regulations is a significant step forward that will empower consumers, make businesses more accountable, and encourage strong security practices.

If pressed on security of data stored or processed outside of Canada

- Companies must comply with the law of jurisdictions in which they operate.
- Canadian courts have recognized that PIPEDA applies beyond our borders when there is a real and substantial connection to Canada.
- The Privacy Commissioner of Canada has investigated many cases with a cross-border dimension, and is empowered to cooperate with international counterparts.

Artificial Intelligence

Q1. Which ministry regulates the development of artificial intelligence in Canada?

- The use of AI and its supporting activities operate within an existing marketplace framework that are subject to existing laws and regulations covering competition, intellectual property, privacy and security. The principles that have been established in Canada's regulatory framework serve as a solid foundation for examining the deployment of AI.

- For example, the *Personal Information Protection and Electronic Documents Act's* principles related to collection, use, disclosure, accuracy and openness provide a framework for decision makers in the context of commercial activities including those that involve use and deployment of AI.

Q2. Are there efforts being made now to regulate artificial intelligence (either its use or its development)?

- Canada has shown considerable research leadership in the field of AI. ISED is implementing a Budget 2017 commitment of $125 million to support the Pan-Canadian Artificial Intelligence Strategy, and the Government of Canada has provided support to AI-related research organizations, such as granting councils (e.g. Canada Research Chairs, Canada First Research Excellence Fund), CFI, CIFAR, and the NRC.

- Internationally, Canada has made artificial one of the center of its G7 presidency. It also recently signed a statement with France calling for the creation of an international study group for understanding and sharing research results on AI issues.

- Given the scope of activities that will be touched by artificial intelligence, Canadians have an interest in the societal benefits and ethical issues related to AI, as well as its economic outcomes. The work undertaken across government in terms of existing policy and market frameworks, along with recent investments and consultations on digital and data transformation, will support sound governance surrounding AI and other similar technologies.

MAKING CANADA A COMPETITIVE, DATA-DRIVEN, DIGITAL ECONOMY

NATIONAL DIGITAL AND DATA CONSULTATIONS

Current Waves

- Mobile and Cloud
- Science and Big Data
- Advanced Manufacturing
- Fintech and Cryptocurrency

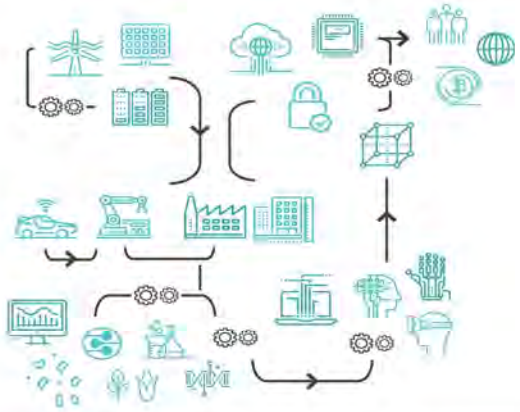
Future Waves

- Artificial Intelligence (AI) and Augmented Reality
- Robotics and Enhancement Technologies
- Autonomous Vehicles
- Genomics

New Ecosystems

- Smart Connected Cities and Society
- Industrial and Research Clusters
- Social Networks

Technologies are reshaping the way people live and connect, the nature of work and industrial production



- Big Data: 90% of the world's data created in the last 2 years
- 80B connected devices by 2025
- Industrial robots to reach 3M by 2020
- AI – Global GDP 14% higher in 2030
- Nearly 10% of jobs automated
- 2B active Facebook users
- 4B Google search per day – 1.2T annually
- Cybercrime to cost $6T annually by 2021

Balance between promoting innovation and safeguarding privacy and trust

A New Digital Era: Nations are Responding

Canada Cannot Afford to Lag Behind



Innovation and Skills Plan

An Ongoing Commitment to Jobs and Growth Across the Innovation Continuum

- National Intellectual Property Strategy
- Pan-Canadian AI Strategy
- Skills (CanCode, digital skills, work-integrated learning)
- Bridging Digital Divides (Literacy, Access, Affordability)
- Innovation Superclusters
- Science and Digital Research Infrastructure
- Clean Technology
- Strategic Innovation Fund
- Innovative Solutions Canada

Future of Work

Exploring how new technologies could impact the way we work, the jobs of tomorrow, and the employment landscape

Unleashing Innovation

Ensuring Canadian businesses can remain competitive, adapt traditional approaches, and identify, adopt and implement digital and data-driven technologies

Trust and Privacy

Frameworks have the right balance between supporting innovation and protecting privacy interests while promoting trust when it comes to data

Smart Cities Challenge

Key Facts Sheet

SCC Update on Key Milestones of Challenge

- The intake of applications to the first competition was concluded at the end of April 2018.
- Finalists were announced at the Federation of Canadian Municipalities (FCM) Annual Conference in Halifax on June 1st, 2018.
- In total, 20 finalists were selected by the Jury (5 from the $5M category, 10 from the $10M category, and 5 from the $50M category) that represent communities with populations ranging from 443 to 1.7million residents.
- Finalists are now working on their final proposals, which will be submitted in early March 2019

Participation

- 130 applications were received from 225 communities
- Applications came in from all provinces and territories, including the following highlights:
    - 11 applications from Indigenous communities as the sole applicant
    - 9 formal partnerships between Indigenous and non-Indigenous communities
    - 5 applications with a focus on Indigenous populations, but without formal partnerships
    - New partnerships were formed within communities, such as the one between the City of Guelph and the University of Guelph
    - There were also international partnerships formed, such as the one between the Region of Waterloo and Unicef

Community Size

- 58 applications were submitted from communities of less than 30,000 residents
- 60 applications were submitted from communities between 30,000 and 500,000 residents
- 12 applications were submitted from cities of more than 500,000 residents
- Among overall applicants, the smallest community to apply has 185 residents while the largest has 2.7 million residents

Main concerns from all applicants

1. 27% improve socioeconomic outcomes
2. 21% increase sense of inclusion
3. 18% integrate and improve transportation
4. 12% improve health outcomes
5. 11% environmental sustainability
6. 6% public safety
7. 5% address demographic pressures

Key focus areas

1. Empowerment & inclusion – 31%
2. Economic opportunity – 23%
3. Environmental quality – 13%
4. Health living and recreation – 12%
5. Mobility – 12%
6. Safe and security -8%

Top Technologies Identified

- As part of their initial applications, communities identified the following top ten technologies as part of their smart cities approach
    - Mobile Applications
    - Open Data Platforms
    - Internet of Things (IoT)
    - Big Data Analytics
    - Networks
    - Geospatial
    - Cloud Computing
    - Sensors
    - Artificial Intelligence (AI)
    - Enterprise Solutions
    - Environmental Monitoring

Smart Cities Challenge Finalists

Finalist	Prize	Vignette
Biigtigong Nishnaabeg (Pic River First Nation), Ontario Population: 443	5M	Language, place-based traditions and a collective approach to communities can be strengthened by the proactive use of new technologies. The community will develop digital teaching tools on STEM subjects, traditional stories and the Anishnaabeg language to form better-educated, more employable, better-grounded and more holistically Nishnaabe people.
Cree Nation of Eastmain, Québec Population: 866	5M	In February 2017, the Cree Nation of Eastmain was short fifty housing units to meet its members' needs. Eastmain's solution to the on-reserve housing crisis is to provide culturally appropriate, Net Zero energy housing units equipped with smart technologies as a cost-effective sustainable solution.
Town of Bridgewater, Nova Scotia Population: 8,532	5M	In Bridgewater, evidence suggests that 40% of residents experience some form of energy poverty either as a chronic or periodic condition. Bridgewater proposes to build energy-efficient housing for low-income residents in addition to retrofitting existing low-income housing. In doing so, it will lift 20% of its residents out of energy poverty by 2028.
Mohawk Council of Akwesasne, Québec Population: 12,315	5M	30% of Akwesasne's residents live with diabetes, a rate more than three times the national average of 9%. The community proposes leveraging smart technologies and holistic Indigenous practices to educate residents on diabetes and its prevention. It hopes to decrease the rate of new cases of diabetes per year in Akwesasne to the Canadian average.
City of Yellowknife, Northwest Territories Population: 19,569	5M	Tourism is becoming an important industry for Yellowknife, attracting travellers with its lakes, trails and views of the Northern Lights. The City is also trying to adapt to climate change, the effects of which are acute in northern regions. Yellowknife proposes to install smart lampposts with features that include: motion sensors, electric vehicle charging stations, data monitoring and collection, interactive tourist information and Wi-Fi hotspots. These features will result in reduced light pollution, improved traffic conditions using real-time data, better services for tourists and reduced local greenhouse gas emissions.
Town of The Pas (group), Manitoba Population: 10,827	10M	In Manitoba, 28.1% of the population had diabetes or prediabetes in 2016, with a projected rate of 31.3% by 2026. The average Manitoban household in 2011 required up to $1,185/month for a four-person family to eat healthy food at a time when the average after-tax income per person in Canada was $2,302/month. The Pas has proposed an LED Smart Farm prototype to improve food security for the Tri-Community, with a view to reversing the escalation of the occurrence rates of diabetes through the provision of healthy food.
City of Côte Saint-Luc, Québec Population: 34,464	10M	While most seniors prefer living in their own homes, they face increased danger of falls, poor nutrition, depression and a lack of social interaction. The ability to live autonomously has become an urgency in the community due to the scarcity of retirement and nursing home beds. The City proposes installing home monitoring sensors for isolated seniors to help ensure their continued safety and well-being at home.
Nunavut Communities, Nunavut Population: 35,944	10M	In Nunavut, the suicide rate is ten times the national average. Legacies of colonial violence are the root cause of social inequities that affect Inuit, such as poverty and overcrowding, where 52% of Nunavummiut live in Social Housing, 38% of which live in overcrowded conditions (up to 72% in some communities) and 80% of which make less than $23,000 a year despite the high cost of living in the North. The Nunavut Communities have proposed a digital mental health platform to increase the availability and accessibility of mental health resources and support systems such as peer-to-peer networks. In doing so, these communities hope to significantly reduce suicide rates in the region.
Saint Mary's First Nation and City of Fredericton, New Brunswick Population: 58,220	10M	Using geolocation technology, private sector mobile apps target customers with personalized messages. Fredericton aspires to bring those same technologies to its seniors, youth, at-risk communities, people with disabilities, newcomers, First Nations and local residents. The City's digital platforms and mobile applications will foster social inclusion and a participatory citizenry, in order to combat the social isolation expressed by many of its residents.
Parkland County (group), Alberta Population: 61,762	10M	The percentage of Alberta farms over 3,520 acres increased from 2.5% to 7.4% between 1976 and 2016. At the same time, the number of Alberta farms decreased by 33.5%, from 61,130 to 49,638. Where able, rural residents are ready adopters of new technology. Today, 12.7% of Canadian farms use direct marketing tools to access markets. Parkland County proposes the use of integrated data and connected technology to bring farmers closer to people's kitchen tables, thereby creating more rural prosperity and encouraging a new generation to consider farming as a viable economic option.
City of Airdrie and Area, Alberta Population: 72,874	10M	Airdrie is a bedroom community of Calgary, Alberta. Airdrie and Area has a current life expectancy of 83 years, as compared to the healthiest community in Alberta at 87.2 years. Airdrie aims to become Canada's healthiest community by creating an open data platform that empowers individuals to adopt a healthy lifestyle. It hopes to increase life expectancy by 3+ years over the five years of the project.

City of Richmond, British Columbia Population: 198,310	10M	Richmond is comprised of 17 islands, at the mouth of the Fraser River. The City is approximately 1m above sea level, and is vulnerable to flooding and isolation. Richmond is proposing smart technology solutions to improve emergency preparedness by monitoring local weather conditions, and to integrate citizen, infrastructure and emergency data and communication platforms to improve emergency response rates and recovery times.
City of Guelph and Wellington County, Ontario Population: 222,726	10M	From 2012 to 2014, approximately 14% of households in Wellington-Dufferin-Guelph experienced food insecurity. There has been a 27% increase in food prices since 2009 for a family of four. Guelph and Wellington County will leverage existing agricultural infrastructure to become Canada's first data and technology-enabled circular food economy. In doing so, it aims to increase access to affordable, nutritious food by 50%.
City of Saskatoon, Saskatchewan Population: 246,376	10M	Saskatoon leads the country in youth break-and-enters, youth mischief, youth assault and youth offences. In Saskatchewan, Indigenous peoples comprise 15-17% of the population, yet are 80-90% of the men in the province's jails and 90-95% of the women. The City of Saskatoon aims to create digital resources to connect and support "at-risk" Indigenous youth, with a view to decreasing the overrepresentation of Indigenous peoples incarcerated.
Greater Victoria, British Columbia Population: 367,770	10M	Greater Victoria is experiencing a sharp rise in the cost of living, resulting in an exodus of low-income individuals and families to the peripheries. The Region must act to address the unaffordability, inefficiency and environmental degradation within its current transportation system. For its Smart Cities Challenge, Greater Victoria will establish seamless mobility options to increase ridesharing/multimodal transportation adoption. The goal of these efforts is to boost South Islanders' mobility wellbeing score by at least 20%.
Region of Waterloo, Ontario Population: 535,154	50M	In 2015, children in Waterloo Region scored lower than the provincial average in physical health and wellbeing; social competence and emotional maturity; language and cognitive development; and communication skills. In addition, approximately 20% of local youth aged 12 to 18 self-reported poor mental health. The community aims to improve the wellbeing of children and youth through technology-based programing that supports equity, mentorship, volunteering, mental health, food security, nutrition and STEAM learning.
Quebec City, Québec Population: 542,250	50M	Public health statistics demonstrate a noticeable gap in indicators such as life expectancy, mortality rate and infant birth weights between Quebec City's affluent Upper-Town and its underprivileged Lower-Town district. The City proposes to deploy data collection, modelling, visualization and communication tools to map the city and track health and socioeconomic issues in real-time. These tools will be used to support decision-making in an effort to reduce social inequalities in health.
City of Edmonton, Alberta Population: 932,546	50M	In 2016, the Conference Board of Canada ranked Edmonton 8th place out of 10 in physical and socio-economic health among larger Canadian municipalities. Edmonton is taking a proactive approach to the problem by addressing the root causes of resident health issues. Its project proposes to create a single Health Data Repository of anonymized data and a Digital Tool to allow residents to identify services they can use to improve their health.
City of Surrey and City of Vancouver, British Columbia Population: 1,149,373	50M	Vancouver and Surrey collectively experience over 75,000 collisions among motorists, cyclists and pedestrians each year, many of which are fatal. Surrey and Vancouver will implement Canada's first two collision-free multi-modal transportation corridors, leveraging autonomous vehicles and smart technologies to attain safer, healthier and more socially connected communities while reducing emissions, improving transportation efficiency and enhancing livability.
Montréal, Québec Population: 1,704,694	50M	Consultations with Montreal's residents have identified mobility as a primary concern for the community. Between 2008 and 2013, the Montreal area car fleet increased by 15%, while the population grew by only 5%. Montreal aims to provide improved public transportation and innovative forms of mobility to reinforce access to local services, including the local food supply. Sustainable forms of transportation will reduce traffic, promote environmental responsibility and preserve the neighbourhood lifestyle that so many Montrealers value.

Meeting with Michael Nobrega, Interim President and CEO, Waterfront Toronto
20 Bay Street, Suite 1310
September 6, 2018
1:00-2:00PM

Background

- You are meeting with Michael Nobrega, who took over as Interim President and CEO of Waterfront Toronto (WT) in July 2018 and represents WT on the Inter-governmental Steering Committee (IGSC).

- You may wish to give an overview of your goals as Chair of the IGSC for 2018-19 [redacted]

Key Points/Questions to Raise

- My principal goal as Chair of the IGSC is to ensure the Committee has a full picture of where Waterfront initiatives have been and where they are going. [redacted]
- As Chair I also I want to ensure we're using IGSC to have truly substantive discussions. [redacted]
- How have you found your experience to date as interim CEO and President? Do you see any particular challenges, or have specific goals of your own while you occupy this position?

Biography



Michael Nobrega has been Chair of the Board of Directors of Ontario Centres of Excellence (OCE) since 2012, previously serving as a member since 2007. He is former President and CEO of the Ontario Municipal Employees Retirement System (OMERS), one of Canada's largest pension plans with more than $95 billion in assets. In mid-2014, Mr. Nobrega was appointed to chair of the Expert Panel on the restructuring and refinancing of the 750,000 square feet of the MaRS West Tower in the MaRS Discovery District in Toronto. He was also appointed by the provincial government as chair of the Expert Panel on the refurbishment of the 1.2 Million square feet MacDonald block in downtown Toronto. A veteran financial and investment executive with more than 30 years' experience, he previously served as President and CEO of OMERS' wholly owned subsidiary, Borealis Infrastructure Management Inc., an investment entity that originated and structured infrastructure investments for the OMERS pension fund. Prior to Borealis, Mr. Nobrega was a tax partner at Arthur Andersen, a major international accounting firm. Mr. Nobrega holds an Honours BA from the University of Toronto. He also holds a chartered accountancy designation from the Institute of Chartered Accountants of Ontario and the Canadian Institute of Chartered Accountants. In 2009 Mr. Nobrega was named a Fellow of the Institute by the Institute of Chartered Accountants of Ontario.

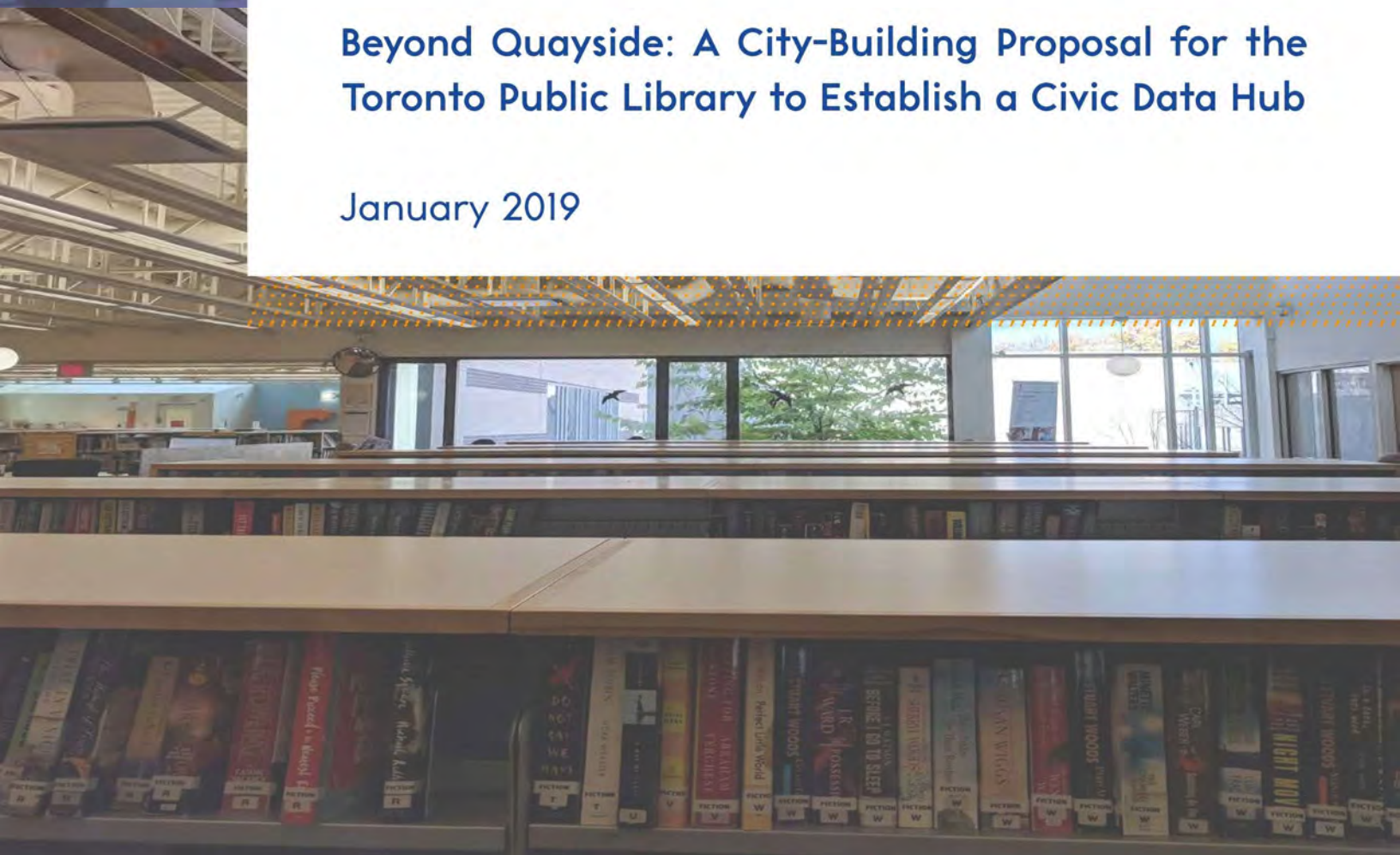


TORONTO REGION BOARD OF TRADE

BIBLIOTECH

Beyond Quayside: A City-Building Proposal for the Toronto Public Library to Establish a Civic Data Hub

January 2019



POSITIONING THE TORONTO REGION AS A GLOBAL CHAMPION

The Toronto Region Board of Trade is one of the largest and most influential chambers of commerce in North America. Our constant flow of ideas, people and introductions to city-builders and government officials firmly roots us as connectors for – and with – the business community. Backed by more than 13,500 members, we advocate on behalf of the business community for policy change to drive the growth and competitiveness of the Toronto region. We act as catalysts to make Toronto one of the most competitive and sought-after business regions in the world, which starts with the success of our members.

Cover photos by Johannes Plenio/Unsplash and Vickey Simovic.

This report was written by Craig Ruttan, Raly Chakarova, Natasha Apollonova, Patrick Gill and Brian Kelcey, with supporting research by Vickey Simovic.

Table of Contents

Executive Summary **1**
Summary of Recommendations 1
Introduction **3**
Building a Smart City 4
The Proposal **6**
Land Use and Urban Planning 6
Digital Governance and Privacy Protection 6
Establishing the Data Hub 8
Collection and Use of Data 8
Enforcement and Oversight 9
Democratic Accountability 10
Funding Considerations 11
Scalability 11
Management of Intellectual Property 11
Conclusion **13**

Executive Summary

Over the past year, significant public attention has focused on a partnership between Waterfront Toronto and Sidewalk Labs, a Google-affiliated company, to develop an innovative proposal for a 12-acre site referred to as "Quayside." This project has prompted an important and far-reaching public conversation about how the rights and interests of residents can be protected as smart city infrastructure and urban data collection become more prevalent.

The future economy is a digital economy. As technology becomes more integrated with every aspect of daily life, issues around gathering and using data responsibly will be increasingly urgent. The Toronto Region is leading Canada in economic growth, but maintaining this edge and remaining globally-competitive requires Toronto to establish a data governance model that encourages innovation while protecting personal privacy. The world is watching, and Toronto has the opportunity to lead other global cities and establish a precedent that could provide a competitive advantage.

While the issue of data governance spans many sectors and projects, public conversation is currently focused on the Quayside proposal. There is an emerging consensus that these issues stretch beyond the mandate of Waterfront Toronto, and that this responsibility should not rest with a private company like Sidewalk Labs. The Toronto Region Board of Trade (the Board) agrees and has explored what other institution(s) should assume oversight responsibility for data governance and associated intellectual property (IP) assets for both Quayside and emerging projects.

The Board recommends that responsibility and authority for developing a Toronto Data Hub and related policies be assigned to the **Toronto Public Library (TPL)**, which has the resources, expertise and public trust to lead this process. This report provides additional recommendations related to collection and use of data, enforcement powers, a funding model, and management of intellectual property rights.

Summary of Recommendations

1. Establish a responsible and scalable data governance model that maintains public control, protects personal privacy and unlocks opportunities for economic growth, setting an example for other jurisdictions.

2. City of Toronto and Waterfront Toronto should retain their existing responsibilities for land use, urban planning and land management as well as the final decision for related issues with the Quayside project.

3. Data governance of the Quayside project should be handled by a third-party organization, not the project proponent.

4. The Toronto Public Library (TPL) should establish the governance structure of a Data Hub, including policies and protocols for the collection and use of data.

5. TPL should determine the structure of a long-term Data Hub, considering both an independent Data Trust model or a ring-fenced Data Repository housed inside TPL.

6. The Data Hub should be overseen by the Information and Privacy Commissioner of Ontario (IPC).

7. The Ontario Government should provide IPC with enhanced enforcement powers, including the ability to levy fines for misuse of data.

8. Once established, the Data Hub should be self-sustaining – operating on a cost-recovery model based on the use of data. The consultation and start-up funds for TPL to lead this project should be provided by Waterfront Toronto through the Quayside as the first *de facto* client for the hub.

9. The public should share in the financial benefits of intellectual property (IP) that is commercialized at Quayside and other public realm IOT smart city projects.

10. TPL should consider using an Academic Consortium or Intellectual Property / Technology Transfer Office approach to capture the economic benefit of IP from the site.

Introduction

In March 2017, Waterfront Toronto launched a competitive Request for Proposals (RFP) process to solicit innovative submissions for the development of a site called "Quayside." In October 2017, Waterfront Toronto announced that Sidewalk Labs was the winner of that competition. Sidewalk Labs is a subsidiary of Alphabet, the U.S. parent corporation for Google.

As of November 2018, Sidewalk Labs has employed more than twenty staff on-site at a temporary facility on Quayside. Sidewalk Labs has been moving through various milestones in the development of its plan, and on July 31st, 2018, both Sidewalk Labs and Waterfront Toronto agreed to a "Plan Development Agreement" to govern the next steps in project development and evaluation. As part of a submission for plan development, Sidewalk Labs provided additional insight into the potential impact it feels it can bring to the project, which could trigger 9,000 construction and design jobs over the property development cycle, subject to continued progress on development of the agreement and other regulatory issues. Sidewalk's plan calls for the construction of 2,500 low-carbon residential units, of which 40% would be below-market, including 20% affordable and 5% "deeply affordable". Commercial space could host over 3,000 full-time jobs, and the site would be designed to exclusively accommodate autonomous vehicles.

Thanks to these and other announcements, the Sidewalk Labs commitment to Toronto could serve as a flagship investment for the Toronto Region's technology community, both nationally and internationally. The arrival of international technology firms in the Toronto market is a critical step in our own battle to retain technology talent, since the presence of a diverse range of firms can offer Canadians and newcomers a full career's worth of opportunities without leaving for work in other cities. However, this project has also become a target for criticism and a magnet for controversy.

The Board agrees that two policy concerns often raised about Quayside are well-founded and must be addressed before they become an insurmountable barrier to the long-term progress of this, or any similar, project. Those issues are **data governance,** and the management of **intellectual property rights** and income gained from data collection from public realm Internet of Things (IoT)[1] smart city projects. What makes public realm data collection distinct is that individuals may not know that data about them is being collected at all when they are in the publicly-accessible space, let alone give explicit consent for the data's collection and use.

In October 2018, Sidewalk Labs proposed that an independent Civic Data Trust, and not the company itself, should control the collection and use of Quayside data. The idea of a data trust

[1] Defined by the IPC as "the networking of physical objects connecting through the Internet". While this is not a new concept, the difference is the complexity of sensors able to collect increasing amounts of data and the proliferation of devices, especially consumer products, built to facilitate communication through Internet connectivity.

has also been raised by members of Toronto's civic tech community. While there was strong support for the idea that no corporation should own the information generated on site, there was clear unease that the project proponent was responsible for framing the debate.

For its part, Waterfront Toronto has worked to address these issues with help from outside experts. However, even strong supporters of the agency's mission (the Board among them) must acknowledge that this development-focused agency does not have the mandate or the resources to develop broad technology policies for the larger city, nor is it resourced to provide independent enforcement or oversight over still-emerging technology practices. Waterfront Toronto has taken action to try and resolve those concerns with outside advice through the appointment of a Digital Strategy Advisory Panel, amongst other initiatives. Still, organizational capacity remains a challenge even with that advice in hand.

Furthermore, this challenge is not going to go away; while there is considerable focus on Quayside, similar issues with public realm data collection are already appearing in other public and private sector situations across Toronto and in the Region beyond. So, from the Board's perspective, this debate offers policymakers an opportunity to identify an overarching institution with the long-term mandate and capacity to consider data management and governance practices for all 'smart' technologies used within the City, embracing the new digital economy in a responsible and beneficial way that balances private enterprise against the public interest.

Building a Smart City

The Board's mission is to make Toronto one of the most competitive and sought-after business regions in the world. Achieving this goal requires building upon the region's competitive advantages. The Board has worked with the City of Toronto and the business community since 2016 to help make Toronto a smarter city.

Smart city initiatives are being implemented in Toronto and across the region, with many receiving global praise for their work. A recent Board study conducted with Deloitte Canada estimates 82,000 workers are employed by 450 smart city companies in the Toronto region.

What is a Smart City?

The Board describes a smart city as *"A city that considers tackling its biggest policy challenges with available and emerging technology solutions."*

Toronto is not the only city becoming more technology enabled. According to Navigant Research, over 170 cities worldwide are presently undertaking at least one smart city project. With this level of activity, there's little wonder the global marketplace for smart city solutions is estimated to reach $1.8 trillion by 2020, according to Arup.

The benefits of a smarter city include data-driven decision-making that could mean less congestion and traffic accidents, safer communities and reduced crime, reduced environmental

footprint, more efficient allocation of public resources, and, of course, better informed and engaged citizens.

The arrival of Sidewalk Labs in 2017 created global media attention and has provided Toronto with the opportunity to leap ahead of global competitors in this space – attracting even more talent, investment and innovation to our region.

To ensure this economic acceleration opportunity moves forward, stakeholders must first resolve the challenge of who will hold and manage the new data generated at the Quayside site and other similar sites, and under what terms. If the right solution is found, it will enable future smart city developments in the Toronto Region to advance more quickly, spurring greater innovation and economic growth.

The Proposal

The Board supports the Quayside project moving forward in a way that benefits Toronto and its residents. Achieving this means determining who is in the best position to oversee the data generated by smart city projects and under what terms. The Board believes the appropriate organization can be identified by considering the following three regulatory concerns:

1) Who should oversee the site's land use, land tenure and urban planning challenges?
2) Who should oversee the new data generated at the site and ensure its privacy?
3) How should the project's public sector intellectual property opportunities be assessed?

Land Use and Urban Planning

The City of Toronto has the existing authority to regulate zoning and land use planning at Quayside, as with any other piece of property in the city. The Board proposes the City retain and exercise this power, as well as its ability to approve and implement infrastructure projects.

Similarly, Waterfront Toronto should continue its role in planning and managing the projects underway to re-invigorate the City's waterfront. Because Waterfront Toronto was jointly created by all three levels of government, it is best-positioned to make the final decision about whether Sidewalk Labs or any other private partner has met all its contractual requirements and whether the proposal should move forward.

Digital Governance and Privacy Protection

Unlike traditional developments, Waterfront Toronto's vision for a smart and innovative neighbourhood at Quayside aims to create a test lab for new technologies looking to tackle the urban challenges of today and tomorrow. It also strongly contrasts the current fragmented use of smart city elements on existing urban infrastructure, such as smart traffic lights and parking lots. This vision has prompted challenging and valid concerns about the creation, protection and appropriate use of data that could be generated through such smart city projects, but also the need for consistent guidelines and a level playing field for those that implement these projects.

These highly-specialized regulatory issues stretch beyond Waterfront Toronto's core mandate. Similarly, although Sidewalk Labs should be commended for its willingness to relinquish control of the data and put forward suggestions on how the data could be managed independently, no proponent or participant in the project should hold final authority on setting the rulebook. There is a growing consensus that data governance should be determined by another organization.

In the Board's view, data governance for the Quayside project should be transferred to a neutral third-party organization with three key characteristics:

1) Expertise in handling and managing data;
2) Authority to uphold privacy laws and resolve disputes; and
3) Community credibility and trustworthiness to defend legitimate public interests.

The Board looked internationally for examples of best practices in managing the new forms of data that will be collected and ensuring personal privacy is protected. While various jurisdictions are making progress on resolving a range of smart city issues like privacy, consent and public intellectual property rights, the complicating reality is that the Quayside project is significantly advanced in its likely potential for the use of public realm data. In fact, many international jurisdictions are watching Toronto to see how it reconciles this smart city-building opportunity, which has created tension between public and private interests, with upholding democratic principles and personal privacy. The Quayside project is a precedent-setting opportunity to lead on smart city technology that addresses sticky problems – an opportunity the Board believes can move forward under the right leadership.

After evaluating many different organizations and options that would meet all three criteria set out above, the Board proposes that the **Toronto Public Library (TPL)** establish and oversee the governance structure for what data can be collected in Toronto's smart city developments and determine how that data may be used. TPL would be responsible for consulting with citizens, experts and relevant private and public organizations to decide on the guiding principles of managing the data, such as data ownership, residency, usage, a robust policy framework and reporting structure.[2]

In the Board's view, the benefits to this approach are many. TPL is an inclusive and trusted community hub that is responsible for providing free and equitable access to information and services to Toronto residents since 1810. TPL has over 100 branches throughout the City and already manages an extensive collection of archives. It is also looking to the future of information management with the launch of its own Open Data site guided by an Open Data policy, as well as establishing an Innovation Council to "increase the library's profile in the technology and innovation spheres". Most importantly, it already falls under existing privacy legislation and reporting requirements to both the Province of Ontario and the City of Toronto.

This shift in responsibility for data governance need not interrupt the continued work of Waterfront Toronto's Digital Strategy Advisory Panel, which has been valuable to the public interest and can continue to provide important feedback on many aspects of this project. The

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[2] It should be mentioned that in the final days of drafting this report, the Toronto Public Library confirmed to the Board that it has had initial contact with Sidewalk Labs over potential provision of library services to the Quayside neighborhood if development plans are realized. From the Board's understanding, there has been no discussion of a data hub, data policy or data management between the two parties at the time at which this recommendation was developed.

Board is merely arguing that this venue is not an appropriate setting for final oversight and resolution of policy issues, given that Waterfront Toronto itself must still negotiate its own commercial stake in this project.

Establishing the Data Hub

This report acknowledges that many questions remain about the entity that could eventually house data from Quayside and other smart city projects. The Board uses "**Data Hub**" as a neutral term to describe the final entity, keeping in mind that the Sidewalk-proposed Civic Data Trust is just one option for this project. While Sidewalk Lab's proposal can inform TPL's review, it should in no way limit TPL's work, which will require extensive public consultations to identify the most appropriate solution. The Board suggests both options of creating an independent Data Trust and a ring-fenced Data Repository housed inside TPL be explored.

Sidewalk Labs and others in the civic tech community have suggested that an independent Data Trust could control the collection and use of data from the Quayside site. According to the Open Data Institute, a data trust is "a legal structure that provides independent third-party stewardship of data." Once the trust is created, outside actors have limited means to influence the operational decisions of the trustees.

In contrast, a Data Repository could function with more direct and ongoing oversight from its sponsoring organization, providing enhanced oversight, accountability, and access to the organization's resources and expertise. In Ontario, data from smart meters in the electricity system is housed in the Meter Data Management Repository (MDM/R), operated by the Independent Electricity System Operator as the designated Smart Metering Entity.

Collection and Use of Data

This discussion and ultimate approach are also part of a larger ongoing conversation related to data collection. As smartphone apps and internet-connected devices proliferate, individuals are agreeing to data and privacy policies without understanding the extent of what data is collected or how it is stored and used. In its consultations, TPL needs to address these issues and determine when and how they apply to smart city developments in Toronto, starting with the Quayside project.

When it comes to the data being collected, the Board is a strong proponent of de-identification, or the removal of personally-identifying information as the data is collected. The Board also supports clear consent and opt-out measures to maximize personal privacy protection. When developing its guidelines, the Board also encourages TPL to consider the 'right to be forgotten' concept, which is used in the European Union and Australia to give individuals greater choice in the management of their personal data.

In terms of data usage, the Board recommends that TPL establish a **Data Use Review Board** with leading research and data experts, for example, from Toronto's world-class academic institutions. Students and staff in these post-secondary institutions consistently undertake research projects that must first be approved by Research Ethics Boards. Those principles and a set of criteria can be applied and expanded for TPL's Data Use Review Board to review and assess applications from different organizations, including public, non-profit, and private, that want to use the data collected from the smart city projects to help ensure that the benefits to the public are maximized.

What Type of Data? What Type of Policy?

While some of the technologies proposed for the Quayside site are already in use around the world, this project is novel for the extensive use of technologies that are envisioned. Because of the existing deep integration of technology with our daily lives, it raises a question of what data should be housed in a Data Hub, and what is the appropriate scope of new policies to govern that data.

If all data generated on site were required to be managed by the Data Hub, applications with a global reach would be required to carve out data generated on this 12-acre site. While there are concerns about the nature of individual consent to data collection in general, these far-reaching issues should be resolved by governments independent of this or any other specific project.

With these considerations in mind, the Board proposes that this approach focus initially on data generated by physical sensors that are installed in the physical site. This would include sensors in public and publicly-accessible spaces, such as streets and retail areas. The Data Hub would need to approve the installation of these sensors and the storage and use of the data they produce through a publicly-accessible and transparent process.

In developing the Data Hub, TPL will need to address these areas of ambiguity and establish clear guidelines. For example, an individual installing a smart thermostat in their apartment for their own use may not be required to go through the Data Hub if there are consent measures already built in through the installation app. However, if the building management wants to install smart thermostats in all units and have access to that data, the Data Hub would be needed as a way of safeguarding public and personal information.

Enforcement and Oversight

Sidewalk Labs has suggested that a Civic Data Trust could audit appropriate usage of data and digital devices. However, the Board believes that enforcement powers should reside with an empowered, publicly-accountable third party.

As a municipal institution, TPL is already covered by the *Municipal Freedom of Information and Protection of Privacy Act* (MFIPPA) and therefore, falls under the authority of the **Information and Privacy Commissioner of Ontario (IPC)**. IPC is also responsible for overseeing the *Freedom of Information and Protection of Privacy Act* (FIPPA) and the *Personal Health Information Protection Act* (PHIPA). These three acts already guide how public institutions and healthcare providers collect, use, and disclose personal information. IPC began its oversight of privacy legislation in Ontario back in 1988 with FIPPA, and its mandate has continued to grow alongside increased public awareness of privacy and data concerns. As a result, IPC has existing authority to protect individual privacy, as well as an established process to investigate privacy complaints related to personal information and ensure compliance with the three acts.

IPC has established investigatory powers and experience with the protection of personal privacy and access to information, but their enforcement powers are woefully outdated. For example, while IPC may issue a report or recommendations, they cannot levy fines against an organization for violating MFIPPA or FIPPA. They hold stronger powers under PHIPA, where an offending individual could be fined up to $100,000, and an organization is liable up to $500,000.

The Board recommends that the Government of Ontario amend MFIPPA to grant IPC the ability to lay fines for misusing data held by TPL, the recommended Data Hub or any other institution under its purview. This stronger enforcement power is necessary to ensure that corporations have the appropriate incentive to properly handle sensitive personal and public data. The provincial government should also ensure that IPC has the necessary resources to enforce strict compliance with existing legislation and the parameters set up by the Data Hub.

As this work progresses, the federal government should also explore whether the concerns raised by smart cities projects in general require strengthened enforcement powers for the Privacy Commissioner of Canada, which oversees the *Personal Information Protection and Electronic Documents Act* (PIPEDA). The act is the federal privacy law for private-sector organizations that sets out the ground rules for how businesses must handle personal information in the course of commercial activity.

Democratic Accountability

Democratic accountability must remain a foundational component of this project. IPC is an independent office, required to report to the Legislative Assembly of Ontario. Additionally, TPL must provide annual and on-demand reports to the Ontario Minister of Tourism, Culture and Sport. City Councillors are appointed to the Toronto Public Library's board, providing additional municipal oversight by elected officials. Additional measures can also be added to strengthen public trust and oversight.

Funding Considerations

The creation of the Data Hub must be appropriately resourced. While TPL has experience in data management and democratic governance, it will need dedicated funds to ensure the public consultations for, and design of, the Data Hub are done correctly. The Board recommends a fee-for-service model that will ensure the entity is self-sustaining – operating on a cost recovery basis. Considering that the Quayside project will be generating the initial input of data, the Board believes the start-up funding should be provided by Waterfront Toronto as the first de facto customer of the Data Hub. Should Waterfront Toronto choose to, they can recuperate those funds from the project proponent.

The fee structure should be designed as part of the entity's creation, but ultimately ensure that the organizations who wish to collect and use the data housed by the entity will fund its operations on an ongoing basis. In designing the fee structure, TPL should also consider giving preferential lower fees to public sector organizations or non-profits, or making certain types of data freely available to be consistent with TPL's mandate. The Board believes that introducing a fair and transparent fee structure does not undermine democratic access to the data and could help ensure that the data produces value, a very important point explored further below.

Scalability

In its recommendation for TPL to spearhead this regulatory component of the Quayside project, the Board also considered the importance of scalability and a model that will act as a precedent for the management of data for smart city developments across the City. As more technological projects are implemented in Toronto's public realm, whether through private companies or civic initiatives, an overarching body must be responsible to ensure that personal privacy is protected, and data is used responsibly. TPL has the capacity to serve this function for Toronto, and potentially beyond: under the *Public Libraries Act*, TPL is singled out as a resource for the library community in all of Ontario.

In its deliberation on the nature of the Data Hub and whether it should be an independent data trust, TPL should consider scalability and the potential for the entity to host additional data generated in the City (or in other potential partner cities) to ensure consistency and maximize the public benefits and generated knowledge of the collected data.

Management of Intellectual Property

Several Canadian thought leaders have expressed concern that Canada is missing out on the economic benefits of intellectual property (IP) created in Canada or by Canadians – citing the Quayside project as one recent example. However, agreements between Waterfront Toronto and Sidewalk Labs note the need to negotiate the ownership and use of IP generated at the site. While the Board believes this is a larger problem that ultimately requires a national approach led by the Federal Government, the Board is putting forward an interim and scalable approach for Quayside and other similar future projects.

A primary goal of Toronto's waterfront revitalization is to deliver new economic benefits to Torontonians. This goal is reaffirmed in Waterfront Toronto's Quayside RFP. Recognizing and supporting this goal, the Board believes the issue of managing Quayside's IP is best framed as a discussion about capturing the economic value of the Quayside project.

Quayside is designed to serve as an innovation testbed to develop and deploy new services and products. The ability to benefit from data generated at Quayside, combined with supporting government infrastructure investments and regulatory changes, provides an uplift in the value of this IP. In many ways, the value creation considerations of Quayside are similar to the land value capture potential of a government-procured transit line or station. If policymakers can begin thinking of the Quayside project in these terms, they can start having constructive discussions about capturing the value of Quayside and its future data – which again, will have been catalyzed by government action.

To allow the public to benefit from the potential value of Quayside and its data, the Board recommends that TPL work with other organizations, including Waterfront Toronto, to identify tools to capture a portion of the value of Quayside's data for Toronto residents. As with the traditional land value capture approach used by municipal governments, there are different value capture typologies that could be used. In doing this, it is important that the following three factors are considered:

1) Ownership or control of IP or data is usually considered to be required for commercialization (a.k.a. the economical benefit from it). As such, TPL must determine how ownership of new IP or data is shared, if at all. The Board has identified "city tech" as one of Toronto's most promising hotbeds of industrial growth and leadership, making it essential to create a framework that can support this sector while maximizing public benefit.

2) The Board acknowledges that the TPL's strong reputation in the grassroots technology community derives in part from its commitment to open data policies. However, considering the City of Toronto has "minimal visibility into how open data is being used by local businesses, entrepreneurs and start-ups" according to the City's own Open Data Master Plan, a fully open data approach should not be a starting assumption. Rather, TPL should determine if an open data approach is an effective method of catalyzing and capturing knowledge, and therefore economic benefit, for Torontonians on a case-by-case basis, and be open to other approaches where doing so is consistent with privacy principles, and where commercial access is appropriate.

3) According to Waterfront Toronto's Quayside RFP, the project will deliver an economic benefit for Toronto by "establishing" an urban innovation cluster. Any IP strategy for smart cities needs to consider that Toronto already has a large, growing smart cities ecosystem independent of the Quayside project.

Following its exploratory research, if TPL decides that Torontonians should maintain an ownership stake of Quayside or similar smart city project-related IP, the Board recommends using an Academic Consortium or Patent Office partnership approach.

1) **The Academic Consortium Approach:** Researchers and third-party organizations could disclose their commercially viable intellectual property to the Hub and TPL's Data Use Review Board and work with one of the Academic Consortium's innovation offices to patent their invention or creation. While all universities in the Academic Consortium have commercialization offices that offer comparable services, they have different models for sharing revenue on assigned intellectual property. This approach would ensure future revenue generated from the smart city projects benefit Toronto and strengthens its strategically important academic institutions and talent pool.

2) **The City Commercialization Office / Tech Transfer Approach:** Researchers and third-party organizations could disclose their commercially viable intellectual property to the Hub and work with a new Intellectual Property Transfer and Commercialization Office, created within the City of Toronto, to protect their invention or creation. The new Office would not only offer commercialization services similar to the services provided by Toronto's universities and colleges, but it would use a comparable revenue sharing model as well. This approach would ensure future revenue created from the smart city projects benefit Torontonians directly through the City's projects and services. Moreover, the establishment of a Patent Office at the City could help it foster innovation internally and tap into a new source of revenue for city-building projects.

This conversation and ultimate approach can also help inform the federal government's IP Strategy, which is meant to maximize the protection and access to IP for Canadian businesses, as well as reform legislation related to IP.

Conclusion

The Toronto Public Library is an institution regulated by provincial law, with a strong reputation for sound information management and data savvy, a keen sense of public mission, and a mandate broad enough to accommodate the public interest without crowding out legitimate economic and business opportunities. Designating a respected and neutral civic institution to create a Data Hub for public realm IoT smart city projects also serves another purpose: city-building. It is a policy approach that anticipates the future institutional needs of the information-powered city.

The Board believes in investments that increase Toronto's global competitiveness and supports the hard work of Waterfront Toronto's directors, advisors, staff and partners to develop the Waterfront and bring an innovative proposal like Quayside to Toronto.

But the Board also believes that all parties' interests will be served better if final oversight, regulation of precedent-setting data governance and intellectual property policy questions are resolved by an explicitly public agency with a long-term mandate.

Other organizations and participants in this debate may offer other alternatives, which the Board is open to supporting if they align with the principles outlined in this report: a neutral third-party data governance model, enhanced and democratically-accountable enforcement mechanism, and sharing the financial benefits of IP commercialization with the public. The Board presents this proposal in the spirit of finding common ground and identifying a path that can give these important conversations the greatest chance of reaching a successful, widely-supported outcome that sets Toronto up for success in the knowledge economy, while becoming a leader in protecting personal privacy.

Table of Contents – August 23 DM briefing on Waterfront Toronto IGSC

Tab 1:

- **Draft agenda for September 6, 2018 IGSC meeting**

Tab 2:

- **Waterfront Toronto-Sidewalk Labs timeline of key events and deliverables: Fall 2018 – Spring 2019**

Tab 3:

- **July 20, 3018 draft IGSC minutes**
- **May 10, 2018 draft IGSC minutes**

Tab 4:

- **CBC article on Aug 14-15 Waterfront Toronto/Sidewalk Labs Public Roundtable #3**
- **Waterfront Toronto / Sidewalk Labs presentation from roundtable #3**

Tab 5:

- **Mater Innovation and Development Plan (MIDP) Scope and Pillar areas**

Tab 6

- **Report on August 16, 2018 Digital Strategy Advisory Group (DSAP) meeting #3**
- **Draft DSAP work plan**
- **Draft Sidewalk Labs Responsible Data Use Policy Framework**

TAB 1

Agenda
Toronto Waterfront Revitalization Initiative IGSC
September 6, 2018

Toronto City Hall, 24th Floor East Tower, and by Teleconference
2:30 – 4:00 PM

1. **Welcoming Remarks and Introductions** – DM INFC (5 Min)

2. **Approval of May 10 and July 20, 2018 IGSC Minutes** – ALL (5 Min) – Decision Item

3. **Port Lands Flood Protection Update –** (WT Chief Project Officer, David Kusturin) (10 Min) – Information Item

4. **Quayside –** (WT Chief Development Officer Meg Davis) (20 Min) – Information Item

   - *Project Update*
   - *Digital Advisory Strategy Advisory Panel Update*

5. **Waterfront Toronto 5-year Plan –** (WT Chief Strategy Officer Marissa Piatelli) (20 Min)– Information Item

6. **WT Financial Update –** (WT Chief Financial Officer Lisa Taylor) (10 Min) – Information Item

   - *Quarterly Financial Report*
   - *Status of WT Borrowing*
   - *Extension of WT's borrowing consent to 2028*
   - *Provincial AG Audit Update*

7. **Enterprise Resource Planning (ERP) System Implementation Update – (5 Min) – Information Item**

   - *WT Status Update (WT – TBD)*
   - *City-commissioned EY Audit of ERP System (David Stonehouse, Director, City of Toronto Waterfront Secretariat)*

8. **Tri-government accord (10 Min)**

   - *Tri-government Working Group (TWG) progress update (David Stonehouse, Director, City of Toronto Waterfront Secretariat)*

9. **Other Business or In Camera (If necessary) – (5 Min)**

DRAFT

TAB 2

ATIA - 21(1)(b)

ATIA - 21(1)(c)

Waterfront Toronto -Sidewalk Labs timeline of key events and deliverables: Fall 2018 – Spring 2019

IGSC engagement / Key WT-SWL milestone / Key public engagement / **WT legislatively-mandated plan** / Tri-gov't staff-level engagement

Sept

- Sept 5: Staff-level telcon re. WT Long-term funding plan (annual plan)
- **Sept 6 IGSC: Port Lands update; Quayside update; Quarterly financial update, ERP status; WT 5-year plan; tri-gov't accord**
- Sept 13: Staff-level telcon re. preliminary discussion of WT 5-year plan

Oct

- Oct 3: DSAP-linked 'Civic Lab' #1 – public engagement event that discusses PDA data governance principles
- Oct 18: DSAP #4

Nov

- Early Nov : WT/SWL release comprehensive description of component parts of MIDP, likely in form of an annotated Table of Contents
- Date TBC: WT/SWL Public Roundtable #4 discusses MIDP components including proposed site plans
- Nov 7: DSAP-linked 'Civic Lab' #2 discusses privacy, algorithmic transparency, broader ethical issues (hosted at Ryerson U)
- **Nov 8 IGSC: Briefing on Components parts of MIDP;** [redacted]

Dec

- Dec 5: DSAP-linked 'Civic Lab" #3 discusses data ownership business models and IP
- Dec 13: DSAP meeting #5
- **TBC: WT Long-term funding Plan (annual plan) approved by WT Board of Directors; received by 3 orders of gov't**
- **TBD: WT 5-year plan approved by WT Board of Directors; received by 3 orders of gov't (extension into early 2019 to develop 5-year plan?)**

Early 19

- Early 2019: Complete work-in-process draft MIDP released for public consultation
- TBC: WT/SWL Public Roundtable #5 solicits feedback on the draft MIDP
- Jan 17 IGSC: [redacted]

Spring 19

- Date TBC: WT/SWL publish proposed MIDP in finished form for consideration by WT Board of Directors and by the Alphabet Board
- Date(s)TBC:
- IGSC (TBC): [redacted]

TAB 3

Toronto Waterfront Revitalization Initiative
Quayside-focused Intergovernmental Steering Committee
Meeting Minutes

Friday, July 20, 2018
2:00 to 3:30 PM

Federal Representatives:	Kelly Gillis (Chair), Shawn Tippins, Brook Simpson (via telcon)
Provincial Representatives:	Scott Thomspon, Chris Giannekos, Bruce Singbush, Adam Redish
City of Toronto Representatives:	Giuliana Carbone, Lou Di Gironimo, David Stonehouse, Jayne Naiman, Mike Williams, Siri Agrell
Waterfront Toronto Representatives:	Michael Nobrega, Julius Gombos, Meg Davis, Marissa Piatelli, Ed Chalupka, Michael Bernstein, Carol Webb

	ITEMS DISCUSSED	
1.	Welcome and Introductions	Kelly Gillis welcomed all IGSC members to the meeting, and acknowledged Scott Thompson as the new Deputy Minister of the Ontario Ministry of Infrastructure, and Michael Nobrega as acting President and CEO of Waterfront Toronto.
2.	Approval of June 14, 2017 Quayside Executive Steering Committee (ESC) Meeting Minutes	It was agreed that the minutes would be amended as per comments voiced by the City of Toronto's Waterfront Secretariat, and re-circulated. In addition to the minutes reflecting that the Quayside ESC is to be discontinued in favor of having Quayside-focused meetings of the IGSC, the minutes would be amended to read that Quayside-focused IGSC meetings would be held 'as required' instead of every 6 weeks.
3.	Quayside (i) Comments and questions related to the Plan Development Agreement (PDA)	(i) Julius Gombos, WT Vice President, Project Delivery, summarized the key issues addressed in the PDA, which included: the project objectives and scope of the Master Innovation and Development Plan (MIDP); that there is no sale or transfer of land provided for in the PDA; a September 30, 2019 deadline for Board approval of the completed MIDP; funding of up to US $50 million from Sidewalk to complete the MIDP; and multiple points of approval by WT's Board of Directors. WT outlined the feedback it had received over the previous weeks in various briefings on the draft PDA. Aside from factual

		editing/drafting issues, the main comment arising from governments concerned the depiction of the geographic scope of the project. As a result, a map depicting the MIDP site in an earlier draft of the PDA was replaced with one situating the 12-acre Quayside site within the Designated Waterfront Area, as set out in *the Toronto Waterfront Revitalization Corporation Act*. WT also reiterated to IGSC members that the focus of the PDA remained the Quayside site, while allowing for the exploration of proposals at scale. In response to questions over whether there were pressure points in negotiations with SWL that may be reflected in the PDA, Waterfront referenced the establishment of the project management committee as a key accomplishment for WT.
	(ii) Forward Process for developing the MIDP	(ii) The IGSC discussed the forward process for developing the MIDP. It was noted that public roundtables on MIDP pillar areas would be commencing in the days following the release of the PDA. In this regard, the GR/PR schedule of the PDA would provide guidance on managing the process for community stakeholder consultations. In parallel with Waterfront's process, the City noted that it would also be undertaking a public consultation process and peer review towards the end of the MIDP process.
	(iii) IGSC next steps	(iii) It was noted that a draft Table of Contents for the MIDP would be developed for consultation release [in early November] along with outlines of specific site plans. On next steps for the IGSC, it was determined that a Quayside project dashboard that tracks key performance indicators around timelines/milestone deliverables would be developed and provided to the IGSC for monitoring purposes.
4.	Quayside public engagement and communications	Meg Davis presented on WT's strategy for releasing the PDA following a vote of approval by the WT Board of Directors – scheduled for Tuesday, July 31, 2018. Assuming Board approval and signature of the PDA, its release would be embargoed until approximately 4pm to allow for technical briefings with the media. The October 2017 Framework Agreement (replaced by the PDA) would also be released at the same time. The release of both documents would be accompanied with communications materials explaining the differences between the two agreements. A communications package, including suggested Qs & As, would be provided to governments in the mid-week prior to the release.

5.	Outcomes from July 16 Tri-government Working Group (TWG) workshop	David Stonehouse presented on a TWG workshop the City had hosted on July 16, which focused on developing a working text clarifying roles and responsibilities between the three orders of government and WT. [redacted] WT representatives welcomed the TWG exercise in principle, noting it may be timely as WT begins developing its next 5-year plan. IGSC members directed the TWG to continue its work and report on progress at the next IGSC meeting.
6.	Other business (i) WT five-year plan	(i) WT noted that it is working on its next 5-year plan, which may also provide an outlook for the final 5 years remaining in the life-cycle of WT, whose mandate will expire in 2028. As a result, WT noted that it is considering governance requests as part of its 5-year plan. The Plan covers a period starting on April 1st of next year, but needs to be approved by WT's Board of Directors by the end of this December. The importance of allowing for a review period with the three levels of government in October was raised. In this regard WT indicated that it was looking at setting up a meeting with TWG representatives in September to go over the draft table of contents and overall approach for the five-year plan. WT also noted that it would also be turning attention to its annual long-term funding plan which looks at the funding nature of its relationships with governments.
7.	In-Camera Session	The government partners requested an in-camera session.

Final for IGSC APPROVAL

Toronto Waterfront Revitalization Initiative
Intergovernmental Steering Committee
Meeting Minutes

Thursday May 10, 2018
2:00 to 3:30 PM

Federal Representatives:	Kelly Gillis, Glenn Campbell, Gerard Peets, Marie-Pier Nassif, Kathy Morin, Brook Simpson
Provincial Representatives:	Bruce Singbush, Carol Mercer, Lynn Kekanovich
City of Toronto Representatives:	Lou Di Gironimo (chair), Giuliana Carbone, Jayne Naiman, Mike Yu, Brett Howell
Waterfront Toronto Representatives:	William Fleissig, David Kusturin, Lisa Taylor, Marisa Piattelli, Ed Chalupka, Meg Davis

	ITEMS DISCUSSED	
1.	Welcome and Introductions	Lou Di Gironimo (Interim Deputy City Manager) and Giuliana Carbone (Interim City Manager) introduced themselves to the IGSC. The Government of Canada agreed to chair IGSC meetings for the remainder of the 2018/19 Waterfront Toronto fiscal year.
2.	Approval of January 25, 2018 IGSC Meeting Minutes	IGSC minutes were approved with no amendments.
3.	Port Lands Flood Protection (i) Contribution Agreement Update (ii) Project Update (WT)	(i) Will Fleissig thanked the government partners for coming together to finalize the Flood Protection and Enabling Infrastructure Contribution Agreement. (ii) David Kusturin provided a project update. Design work is advancing on river/park, roads/infrastructure, and bridge components. Schematic design (30%) is anticipated in May and updated costs are expected in June/July. Villiers Park and Promontory Park North will be designed to 30% detailed design and construction costs are not included within the $1.25 billion. Design excellence is being pursued for the 3 bridges using a common design / form approach. The intention is that the continuity of bride design will generate costs similar to or lower than 3 separate bridge designs. Budget and materiality will

		impact final design. The Design Review Panel and the City's Structures group are engaged. Cherry Street lakefilling is advancing. Barges are currently delivering core stone fill onsite. Anticipated Final Hard Costs for Cherry Street are higher than the Current Approved Budget ($48.4K vs. $41.8K) as a result of higher grade fill costs. Cherry Street contingency has been applied to cover the costs. WT is forecasting 100% of the budget will be spent. The Province requested additional detail related to hard costs for the Cherry Street project. Consultant contracts issued to date reflect the dollar value approved by governments before the $1.185 billion CA. WT is now in the process of updating contracts values. A Partners Meeting with the 30+ consultant teams is scheduled for May 18, 2018. Construction Baseline Schedule (10% design) is done and will be updated once Schematic Design (30% design) is completed. Site preparation, clearing and shallow excavation will begin in July 2018. A Public Meeting was held in March and another is scheduled for July 18th, 2018. Initial Risk Management Workshop completed March 21/22 and the next will occur after Schematic Design. Project Soft Costs were approved by the WT Board in March.
4.	Update on First Nations Consultation (i) Mississaugas of New Credit (ii) Mississaugas of Scugog Island (iii) Federal Approvals	(i) Meeting was held between the MNCFN, the government partners and WT on April 16, 2018. Ongoing conversation between the MNCFN and WT to develop an MOU to formalize involvement in public realm and other aspects. Federal government will link WT with appropriate contacts to advance MOU dialogue. (ii) Province has determined that Duty to Consult has been triggered for both the MCNFN and the Mississaugas of Scuggog Island. (iii) WT has received Federal confirmation that the Duty to Consult has been satisfied to date.
5.	Quayside (i) Project Update	(i) Meg Davis provided a project update on Quayside. The Quayside Executive Steering Committee (QESC) held its first monthly meeting on April 19, 2018 and a Digital Advisory Panel was announced on April 27, 2018.

		WT is looking for opportunities to bring Canadian businesses to scale. Timelines for Partnership Development Agreement (PDA) and Master Innovation Development Plan (MIDP) are evolving and will be given the time they need for the parties to "get it right".
		[redacted]
		WT noted the QESC meeting scheduled for May 18 will be cancelled.
6.	ERP Implementation (i) WT Roll-Out	(i) Competing WT staff resource demands have posed implementation challenges. The "go-live" date has been pushed from April to summer / early fall. It was clarified that all projects will "go-live" at the same time. At the request of the Federal government, WT agreed to provide regular dashboard updates for every project using a standard template similar to the Port Lands Flood Protection dashboard. The standard template will track work

		completed/forecast and spending to date and forecasted by project. WT will share the WT Board template with the government partners.
	(ii) City Audit	(ii) EY has been officially retained by the City and EY has met with WT to review timelines. EY will participate in a week long "control room pilot" exercise that will test WT's processes against the ERP software. EY will generate a report to the City after the pilot is complete and the City will share the results with the government partners as appropriate.
7.	WT Financial Update (i) Quarterly Financial Report (ii) Borrowing (iii) Five Year Strategic Business Plan	(i) As of Q3, WT is realizing approximately 75% for Key Deliverables, Budget and Revenues. WT is in the process of finalizing Q4 results. (ii) WT has negotiated a new Centralized Cash Control (CCC) Service with its bank to pool WT's account balances for interest income/borrowing cost purposes. The Flood Protection Project's working capital balance is sufficient to maintain a positive corporate account balance for at least the next 3 years and therefore no borrowing is anticipated. (iii) As defined in the Legislation, WT is required to prepare a Five Year Strategic Business Plan by December 31, 2018. WT will ensure there are multiple check-in points with government partners before the document is finalized. Priorities include: - Business and Implementation Plans for future Precincts; - Addressing how private capital can be brought to the table; and - Utilizing the capacity of CreateTO and others actors in the area. Strategic options will be presented to IGSC in the early fall. It is important to align IGSC approvals with WT Board approval dates. Governments require WT to pull together a master calendar to outline the sequence of approvals. The City sought clarification as to what the "Port Lands" priority project references in the WT handout. WT clarified that the immediate task is for the completion of a Business and Implementation Plan for the Villiers Island Precinct. It was suggested that this priority be amended to reflect this scope. MNP performed an independent audit of WT's Enterprise Risk Management framework and it was presented to the Finance, Audit & Risk Management Committee in March. Several strengths and areas for improvement were noted by MNP. The areas for improvement will be implemented by MNP until WT fills the COO position. The Committee also approved a two-year internal audit plan.

8.	Other Business (i) Waterfront Toronto (ii) Federal Government (iii) Provincial Government (iv) City of Toronto	(i) WT provided the IGSC with an update on the proposed Capital Peer Review Panel which seeks to enhance WT's existing WT governance and risk management framework to address the increased risks associated with the Flood Protection Project. Key elements include ensuring clear lines of responsibility and a 3 line approach to project management. WT is attempting to schedule the inaugural meeting prior to the May 31, 2018 FARM Committee meeting. WT asked the government partners to help identify candidates who may sit on the Panel [redacted] WT will send the government partners a mandate package to help identify potential candidates. WT asked for the City to clarify its transit priorities based on the transit MOU recently signed between the City and the Province. City staff are meeting with Metrolinx and Province to advance all projects outlined in the MOU and the parties are currently mapping out the schedules (design, tendering, construction, etc.) for the next 5-10 years. Once this is completed, the City will be in a position to provide an update to WT, likely in July. The City is building capacity for the life of all these projects and the the Waterfront Secretariat will be plugged into conversations with the new transit unit.
9.	In-Camera Session	The government partners did not request an in-camera session.

TAB 3

TAB 4

CBC

Sidewalk Labs has unveiled its bold vision for Quayside. Just don't ask how it'll get built

Google sister company hasn't said how it'll pay for the project, or how it'll use personal data

Nick Boisvert · CBC News · Posted: Aug 19, 2018 5:00 AM ET | Last Updated: August 19



Sidewalk Labs wants to build pedestrian bridges, floating barges and outdoor projection screens in Quayside. (Sidewalk Labs)

It would be a neighbourhood unlike anything Toronto, and perhaps the world, has ever seen.

On the ground, there will be hexagonal, modular pavement tiles that can melt away ice and change colour to alter traffic flow.

At street level, pedestrians will shop and mingle in dynamic, shifting spaces inspired by the meeting places of ancient Greece.

Above them, wooden towers will stretch up to 30 storeys into the sky with extendable "rain jackets" to protect outdoor spaces from inclement weather.

The bold concepts were unveiled earlier this week by Sidewalk Labs, the Google-affiliated company that's been tasked with transforming a barren, 12-acre waterfront property into a visionary "smart city."

While the company's plan now includes everything from detailed renderings to proposals for construction materials, major questions remain about how Sidewalk Labs will turn its bold ideas into a real neighbourhood.

- **Toronto is going ahead with high-tech Sidewalk Labs neighbourhood on its waterfront**
- **Welcome to the neighbourhood. Have you read the terms of service?**

"What you're seeing is a lot of proposals to push the boundaries," said Matti Siemiatycki, an associate professor of geography and planning at the University of Toronto.

What's less clear, he says, is how Sidewalk Labs will execute its ideas, monitor people in the neighbourhood, and secure enough money to bring everything to life.

"People are very interested in how the revenue works on this, where does the money come from to pay for all of these innovations," said Siemiatycki, who's been working as an independent adviser on the project.



The proposed pavement design features modular tiles that will allow for quicker repairs. They may also be able to change colours and heat up to melt ice. (Sidewalk Labs)

Master plan due by end of year

Some of those details are expected in Sidewalk Labs' Master Innovation and Development Plan (MIDP), which is due before the end of 2018.

Sidewalk Labs says it is now beginning to shift its focus from conceptual ideas to a realistic development plan.

"A lot of the early work has been focused on trying to understand what might be possible, what could be the type of experience that we could create here," said Sidewalk Labs' public realm director Jesse Shapins.

"Implementing this is going to be a different challenge and we're working closely to explore a lot of partnerships for how to make that possible," he said, noting that that work is still in its early stages.

The financial plan will be vetted by Waterfront Toronto, the tri-governmental agency that oversees development in the area and awarded the Quayside project to Sidewalk Labs.



Matti Siemiatycki says the key 'is to bring the community on board at every stage and to be transparent about what ideas you're really considering.' (University of Toronto)

The organization says Sidewalk Labs will have to meet a series of requirements for work to go ahead.

"We have to check the feasibility of the actual construction technologies, the materials, all the innovative approaches," said Meg Davis, Waterfront Toronto's chief development officer.

"Can they actually achieve the expectations that we have? And then, if they can, what is the financial feasibility of that."

How will personal data be used?

Waterfront Toronto says the master plan will also have to meet strict privacy requirements, and the organization promised that data collected will be used "to improve the public experience," and not, for example, to sell advertising.

However, experts watching the project say some type of data collection or monitoring of people in the neighbourhood is likely to be at least a component of the project's revenue plan.

- **Sidewalk Labs 'hadn't foreseen' data concerns in designing Toronto neighbourhood**

"You're going to see a variety of different revenue streams," said Siemiatycki. "The data is the open question."





Building jackets will extend to protect pedestrians during bad weather. (Sidewalk Labs)

Those concerns have grown since the Associated Press recently revealed that sister company Google continued to track its users movements after they explicitly told the company not to.

"We're very sensitive and aware of those issues and we are monitoring the sister company's activities as well," said Kristina Verner, Waterfront Toronto's vice president of innovation, sustainability and prosperity.

Sidewalk Labs says parent company Alphabet Inc. — which was created as part of a Google restructuring in 2015 — has been clear about its intentions with the project.

"[Alphabet] is very focused on the outcomes, and what's possible when applying this type of approach to building cities," said Shapins.

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SIDEWALK TORONTO
welcome!
Roundtable Three • August 14th + 15th, 2018
WATERFRONTtoronto
SIDEWALK LABS


SIDEWALK
TORONTO
Indigenous
Land Acknowledgement
Habon Ali + Aaron Barter
SIDE
WALK
LABS

WATERFRONToronto

Established in 2001 by the three orders of government.



Waterfront Toronto

Values

1. A Waterfront for People
2. Public Involvement
3. Transparency
4. Private & Public Participation

Waterfront Toronto

Roles

Catalyst & Steward

Creating enduring value through well-designed and vibrant cultural, recreational, civic and public spaces.

Revitalization Lead / Landowner

Advancing Complete Communities that address the need for housing, mobility, accessibility, connectivity and inclusivity.

Partner

Leveraging innovation and partnerships to deliver economic growth and jobs.

Waterfront Toronto

Leading Waterfront Revitalization



Waterfront Toronto

Upcoming Public Meetings & Events

Design Review Panel	Digital Strategy Advisory Panel	CivicLabs – Data Governance & Privacy
September 26	August 16	October 3
October 24	October 18	November 7
November 21	December 13	December 5
December 12		

Today

Where We Are in the Process

SIDEWALK TORONTO

Roundtable **01**

Sidewalk's Approach to Innovation

20 March **2018**

Roundtable **02**

Responsible Data Use, Streets & Housing Affordability

3 May **2018**

Roundtable **03**

Building Blocks of Quayside

14 & 15 August **2018**

Roundtable **04**

MIDP Proposals Document and Draft Site Plans

November **2018**

Roundtable **05**

Solicit Draft MIDP feedback

Early **2019**

City / Government Public Review & Public Consultation

MIDP

Spring **2019**

Final Master Innovation and Development Plan

Today

Tonight's Objectives

01	Share Feedback & Resident Research
02	Vision for Quayside
03	Approach to Streets
04	Approach to Buildings
05	Question & Answer Session
06	Roundtable Discussion
07	Reporting Back

Today

Public Engagement by the Numbers

307 Open Sidewalks and Programs **4.2k+** attendees



Residents Reference Panel **4** sessions



Sidewalk Fellows Program **5** cities



Expert Advisory Groups **12** sessions

YMCA-Sidewalk Toronto City Summer Camp **15** campers



The First Two Roundtable Meetings **1k+** participants



Sidewalk Public Talks **400+** attendees



Neighbourhood Association Meetings **4** sessions



Today

Public Engagement - Summary of Roundtable II

What we heard you care about....

CREATING a complete community that provides opportunities to live, work, and play

RECEIVING more detailed information about the plan for Quayside

UNDERSTANDING when and how data could be collected, and how consent will be obtained

PROMOTING active transportation, while maximizing convenience and choice

ENSURING Quayside is a welcoming and inclusive community for all

PROVIDING a good mix of housing options that makes Quayside attractive to different households and incomes

ENSURING that Quayside is well connected and integrated with the rest of Toronto

CREATING a vibrant and dynamic neighbourhood with mixed-use buildings and a lively public realm

TAB 5

SCHEDULE B
MIDP SCOPE

Capitalized terms used but not otherwise defined in this MIDP Scope shall have the meanings ascribed to such terms in the Plan Development Agreement.

1.01 **Purpose of the MIDP**

(a) In developing the MIDP, the Parties wish to create a plan for the development of a place that achieves the shared objectives of Waterfront Toronto and Sidewalk Labs, including to (collectively, the "**MIDP Targets**"):

(i) Establish a complete community that improves quality of life and increases economic opportunity for a diverse population of residents, workers, and visitors;

(ii) Create a destination for people, companies, startups, and local organizations to advance solutions to the challenges facing cities, such as:

- Jobs and Economic Opportunity
- Climate Change
- Affordability
- Transportation, Mobility, and Congestion
- Inclusivity and Diversity

(iii) Make Toronto a global hub for urban innovation with a specific focus to localize and maximize the economic development benefits associated with this objective;

(iv) Demonstrate how the thoughtful infusion of technology into best-in-class urban design can create communities that are better able to serve the needs of citizens;

(v) Serve as a model for climate-positive sustainable neighbourhoods throughout Toronto and cities around the world;

(vi) Create planning targets (massing, density, phasing and zoning) that reflect sound planning principles;

(vii) Create a financial plan and economic targets that set minimum expectations of land value and rates of return that work at different scales; and

(viii) Establish performance measures that if met justify replication of the development and innovation plan.

1.02 **Creating the MIDP**

To create a plan that meets the MIDP Targets, the Parties have established multiple working groups and "Pillars," each with a focus on one or more of the MIDP Targets. Value will be created through an integrated, synergistic approach between the working groups as the Pillars are developed. The Parties will modify the scope or focus of the Pillars (and/or add or remove Pillars) as needed to achieve their shared goals. Each Pillar as of the date hereof is summarized below:

Pillar	Pillar/Working Group Goals and Subject Matter
1. Mobility	Deliver a safer mobility system that is truly competitive with the private automobile through approaches such as prioritizing pedestrian, cycling, and transit infrastructure; designing people-first streets that prioritize pedestrian safety and accessibility; encouraging shared new mobility options such as self-driving electric vehicles that reduce the need for car-ownership and street space devoted to parking and cars; and using real-time detection to optimize street space, dynamically allocate the roadway network and improve safety.
2. Public Realm	Deliver an enhanced public realm that is more usable, gets people outdoors more of the time, and is personalizable for a diverse community, by enabling the community to program the public realm in a way that responds to its needs; creating adaptable streets that can be quickly turned into comfortable pedestrian space; expanding the public realm into non-traditional spaces; creating an outdoor comfort system that mitigates the impact of wind, snow, and sun; and enabling real time management, maintenance and adaptation.
3. Buildings	Create new types of flexible and adaptable buildings that reduce costs and increase efficiency, sustainability, adaptability and affordability while still emphasizing architectural and design excellence.
4. Community & City Services	Foster a close-knit community that connects people to each other and to their environment using digital tools that enable a seamless interface between residents and service delivery, and empower trusted community providers to deliver more personalized services using secure data integrations and co-location.
5. Sustainability	Set a new standard for urban sustainability and a replicable path to climate-positive communities through approaches such as the reduction of building energy use via design and data-driven energy management, the recovery and reuse of waste energy, the generation of onsite renewable energy and transformation of organic waste into energy, active waste and water management, and an adaptable utilities network.
6. Digital Platform	Approach digital infrastructure in a holistic way and design it into the physical environment from the start, ensure adaptability over time, and enable urban data to be unified in a single place and make it open for anyone to use — including researchers, startups, government agencies, civic organizations, and residents — while setting a new standard for responsible data use that protects privacy.
8. Privacy & Data Governance	Create a responsible data use framework that sets a global standard by establishing consistent, scalable, state-of-the-art policies and processes around privacy, data governance, access to data, data ownership and stewardship, information and data security that are consistent with local values and priorities.
9. Pilots/Early Actions	Run technology pilots and create prototypes in Toronto prior to approval of the MIDP that test pillar hypotheses and advance the collective long-term vision of Waterfront Toronto and Sidewalk Labs.
10. Housing Affordability	Develop a toolkit to serve as a global example for the creation of affordable, diverse, mixed income, and multigenerational communities, composed of innovative programs, policies, business models, and existing programs that make housing more available and affordable for all Torontonians, and over time utilize pillar driven innovation to fundamentally lower the cost to deliver and occupy housing.
11. Economic Development & Urban Innovation Institute	Foster economic development, job creation, future skills preparation and generate prosperity by catalyzing a world leading cluster focused on urban innovation; build on the emerging economic clusters, job creators and entrepreneurial and commercial communities on the waterfront and across Toronto and Canada; create

	opportunities for entrepreneurial companies developing new technologies consistent with delivering the goals and objectives of the Project; and establish anchor drivers including the Google Canadian headquarters and an Urban Innovation Institute on the waterfront.
12. Development & Planning	Incorporate the physical manifestations of Pillar initiatives into a holistic and integrated planning and development process, and create strategies around project phasing, occupancy, statutory and regulatory matters, and implementation.

1.03 **Planning At Scale**

The MIDP will include both plans for the Quayside Parcel and plans at scale, including for the MIDP Site as required by the business analysis. The Parties acknowledge that the plans in the MIDP may explore lands not owned or controlled by the Parties.

Any proposed options at scale shall be subject to and closely tied to the achievement of the MIDP Targets and supported by robust business planning and financial analysis, taking into account the Parties' shared programmatic goals and the MIDP Targets, matters of financing and capital formation, anticipated absorption and economic impact, including estimates for job and economic growth, and through the development of business plans and financial models subject to various assumptions (including with respect to potential revenue streams and estimated costs, including of land) and showing various sensitivities and comparisons (including comparing to a baseline "market" / traditional developer scenario). To the extent these analyses demonstrate the need for scale the Parties will incorporate into the MIDP a set of proposed phases and sequencing to achieve such scale and, subject to obtaining necessary approvals, implement such MIDP.

Any implementation of the MIDP will be subject to Waterfront Toronto Approval and Sidewalk Approval, as well as various other conditions, including the receipt of any necessary governmental approvals and clearances and the receipt of any necessary approvals, agreements or consents with landowners or the other third parties.

The extent to and the manner in which successful solutions, processes and partnerships are carried forward into subsequent developments could be affected by requirements of the City of Toronto or other authorities or Waterfront Toronto becoming subject after the Effective Date to applicable procurement Laws.

1.04 **Regulatory Framework**

The Parties acknowledge that the MIDP will address existing applicable laws and the existing policy framework and will note places in which its plans may require revision of, or other approvals under, such existing applicable laws and existing policy framework, in which case the implementation of any such plans will be subject to the relevant Governmental Authorities making or granting such revision or approval. The MIDP will be developed through a process of co-creation and collaboration between the Parties, informed by a robust public engagement process and close collaboration with the City of Toronto and other governmental agencies and stakeholders.

TAB 6

Tippins, Shawn (INFC)

From: Faraday-Smith, Nancy (INFC)
Sent: August 17, 2018 2:21 PM
To: Campbell, Glenn (INFC)
Cc: Tippins, Shawn (INFC); Wellman, Angela (INFC)
Subject: Digital Strategy Advisory Panel meeting (August 16th)

Glenn –

As you may recall, Shawn and I attended the WT Digital Strategy Advisory Panel (DSAP) meeting in T.O. yesterday. Below is a summary of their discussions:

[redacted]

Shawn also helpfully arranged meet & greet meetings for me with MOI (Wendy Ren and team), the City (David Stonehouse) and WT (Ed Chalupka). Discussions were largely introductory in nature, though we did spend some time on the upcoming IGSC as a follow on to the working group telecom we had with all of them earlier this week.

Happy to answer any Qs you may have.
Nancy

Nancy Faraday-Smith

Acting Director, Investment, Partnerships and Innovation
Infrastructure Canada / Government of Canada
nancy.faraday-smith@canada.ca / Tel: 613-854-8418

Directrice intérimaire, Direction génerlae des investissements, des partenariats et de l'innovation

WATERFRONT TORONTO
Digital Strategy Advisory Group Work Plan – 2018-Q1 2019
- DRAFT - FOR DISCUSSION - AUGUST 16, 2018 -

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1. **Background & Mission**

Toronto Waterfront Revitalization Corporation (Waterfront) recognizes the importance of policy development and digital governance issues involved with its innovation and intelligent community initiatives. Waterfront Toronto is committed to working closely with government stakeholders, the public, academia and industry experts to establish and maintain the required policy and accountability frameworks that will be critical to the success of these initiatives.

1.1 Background

The Waterfront Toronto Digital Strategy Advisory Panel (the Panel) was formed in 2018 by Waterfront Toronto as an independent body to guide and inform the revitalization of the Toronto waterfront on issues of digital governance. The Panel is advisory to Waterfront Toronto management.

1.2 Mission Statement

The mission of the Panel is to provide objective, professional advice to ensure that ethical use of technology, accountability, transparency, protection of personal privacy, data governance, cyber security together with the opportunity for broad and equitable benefits to be accrued from the intellectual property and data, are addressed in a robust way to encourage innovation and economic development and preserve the public good.

WATERFRONT TORONTO
Finance, Audit and Risk Management Committee Work Plan – 2017

DSAP Panel Mandate: **Note: Open Session Items are in blue, potential closed session items are in red. TBD or combined open/closed items are in purple.**	**Aug 16/18**	**Oct 18/18**	**Dec 13/18**	**Jan 17/19**	**As required**
(i) At least annually prior to March 31, review and approve the overall scope of the work plan for the panel.	Approve initial mandate Review Work Plan	Approve Work Plan through January, 2019			X
Policy Development					
(i) The Panel is formed, initially, to advise on developing policies and to make recommendations to Waterfront Toronto concerning Digital Strategy related to the Sidewalk Toronto initiative.	PDA Policy Discussion & MIDP guidance	Initial discussion on MIDP components	Initial discussion on MIDP content	Continued discussion and recommendati-ons re: MIDP content	
(ii) The Panel may provide advice relating to other initiatives that are consistent with the mandate of Waterfront Toronto, as set out in the Toronto Waterfront Revitalization Corporation Act, 2002, and that are within the Designated Waterfront Area.					X
Project Reviews					
The Panel is expected to review a wide range of projects and initiatives, including: • Telecommunications network proposals (including, but not limited to, fibre deployments, 5G deployments, public WiFi, etc. • Sensor deployments and other data-gathering efforts • Infrastructure software, including middleware and identity management systems • Waterfront-wide and location specific digital applications • Pilot initiatives of new/emerging technologies		Product deputations from SWL and affiliates.	Product deputations from SWL and affiliates.		X

Other Activities In addition to project reviews, the Panel will act as an advisor to Waterfront Toronto on related issues, such as requests for proposals, innovation procurement, contracts and scopes of work, charrettes and workshops, pilots and temporary installations or events. The Panel may provide advice in the following areas:						
(ii)	Review of related initiatives applications circulated by other stakeholders The Panel may be asked to review relevant digital initiatives being considered for implementation in the Designated Waterfront Area by government stakeholders.	Direction re: Civic Labs	Review of Report from October Civic Lab - Discussion re: future Labs	Review of Report from November & December Civic Labs -		X
(iii)	Advice on proposal calls The Panel will provide advice to Waterfront Toronto on the innovation/digital/data components of requests for proposals calls, either as part of the initial developer selection process or upon selection of a development team, as requested.					X
(iv)	Knowledge Sharing Waterfront Toronto may bring information items, such as corporate strategies and communications plans, to the Panel for their information and/or review as deemed appropriate by Waterfront Toronto staff. Similarly, Panel members may share information items, such as the results of work they have been involved in, with the Waterfront Toronto for consideration in its policies and long-range visioning.	Direction re: White Paper Series				X



Digital Strategy Advisory Panel - Meeting # 7

Thursday January 17, 2019 -1:00pm - 5:00pm

WATERFRONT TORONTO

20 BAY STREET, SUITE 1310

TORONTO, ON, M5J 2N8

WATERFRONToronto

Meeting Book - Digital Strategy Advisory Panel - Meeting # 7

1:00 - 1:05	1. Opening Session		
	a. Call to Order		M. Geist
	b. Approval of Agenda	Approval	All
	Agenda - Page 4		
	c. Declarations of Conflict of Interest		All
	d. Approval of Previous Minutes i. December 13, 2018	Approval	All
	Draft Minutes DSAP December 13 2018 - Page 6		
1:05 - 1:10	2. Chair's Remarks		M. Geist
1:10 - 1:20	3. Management Report	Information	K. Verner
	Management Report - Page 18		
1:20 - 3:20	4. Sidewalk Labs Solutions Overview a. Standardized Mounts (Koala) b. Network Technologies c. Digital Map d. Open Data Hub e. Approach to resiliency and redundancy	Issues Identification/ Discussion	C. Nevill-Manning/ P. Ramaswani/ A. Harvey-Dawson
	DSAP Technology update - Page 22		
3:20 - 3:30	Break		
3:30 - 3:50	5. Waterfront Toronto's Digital Evaluation Criteria for the MIDP	Information & Discussion	K. Verner
	Evaluation Criteria - Page 59		
3:50 - 4:15	6. Subcommittee structure process	Discussion	All
4:15	7. Motion to go into closed session	Approval	All
	Closed Session The Digital Strategy Advisory Panel (the "Panel") will discuss the matters outlined in items 8 and 9, being Consideration of applicants for the Manager Digital Governance role and Consideration of applications of new Panelists respectively, in a Closed Session as permitted by Section 3.6.2 of the Digital Strategy Advisory Panel Mandate and Operating Protocols. The exception relied for the discussion of items 8 and 9 in Closed Session is Section 6.1.1(b) (Personal matters about an identifiable individual, including employees of the Corporation) of By-Law No. 2 of the Corporation. The Panel will		

	continue in Open Session at the end of the Closed Session to discuss and vote on any resolutions pertaining to the Closed Session.		
4:15 - 4:20	8. Consideration of applicants for the Manager Digital Governance	Information	K. Verner
4:20 - 4:30	9. Consideration of applications of new Panelists	Information	K. Verner
4:30	10. Motion to go into Open Session	Approval	All
	Open Session		
4:30 - 4:35	11.Resolutions Arising from the Closed Session (if any)	Approval	All
4:35- 4:55	12. Other business		All
5:00	13. Adjournment	Approval	All

WATERFRONTToronto

WATERFRONT TORONTO DIGITAL STRATEGY ADVISORY PANEL
MEETING #7 - AGENDA

January 17, 2019 -1:00pm - 5:00pm
Waterfront Toronto Boardroom
20 Bay Street, Suite 1320
Toronto, Ontario M5J 2N8

1:00 - 1:05	**1. Opening Session** a. Call to Order b. Approval of Agenda c. Declarations of Conflict of Interest d. Approval of Previous Minutes i. December 13, 2018	 Approval Approval	 M. Geist All All All
1:05 - 1:10	**2. Chair's Remarks**		M. Geist
1:10 - 1:20	**3. Management Report**	Information	K. Verner
1:20 - 3:20	**4. Sidewalk Labs Solutions Overview** a. Standardized Mounts (Koala) b. Network Technologies c. Digital Map d. Open Data Hub e. Approach to resiliency and redundancy	Issues Identification Discussion	C. Nevill-Manning P. Ramaswani A. Harvey-Dawson
3:20 - 3:30	**Break**		
3:30 - 3:50	**5. Waterfront Toronto's Digital Evaluation Criteria for the MIDP**	Information & Discussion	K. Verner
3:50 - 4:15	**6. Subcommittee structure process**	Discussion	All
4:15	**7. Motion to go into closed session**	Approval	All
	The Digital Strategy Advisory Panel (the "Panel") will discuss the matters outlined in items 8 and 9, being Consideration of applicants for the Manager Digital Governance role and Consideration of applications of new Panelists respectively, in a Closed Session as permitted by Section 3.6.2 of the Digital Strategy Advisory Panel Mandate and Operating Protocols. The exception relied for the discussion of items 8 and 9 in Closed Session is Section 6.1.1(b) (Personal matters about an identifiable individual, including employees of the Corporation) of By-Law No. 2 of the Corporation. The Panel will continue in Open Session at the end of the Closed Session to discuss and vote on any resolutions pertaining to the Closed Session.		

	Closed Session Agenda		
4:15 - 4:20	**8. Consideration of applicants for the Manager Digital Governance**	Information	K. Verner
4:20 - 4:30	**9. Consideration of applications of new Panelists**	Information	K. Verner
4:30	**10. Motion to go into Open Session**	Approval	All
4:30 - 4:35	**11.Resolutions Arising from the Closed Session (if any)**	Approval	All
4:35- 4:55	**12. Other business**		All
5:00	**13. Adjournment**	Approval	All

WATERFRONT TORONTO DIGITAL STRATEGY ADVISORY PANEL
MEETING #6 - MINUTES
December 13, 2018 - 1:00pm – 5:00pm

PRESENT: Michael Geist
Kurtis McBride
Charles Finley
Kurtis McBride
Jutta Treviranus
Kevin Tuer
Mark Wilson
Andrew Clement
Teresa Scassa
Pamela Robinson
Dave Dame
Alaina Aston

VIA REMOTE:
Carlo Ratti

REGRETS:

WATERFRONT TORONTO MANAGEMENT & EXTERNAL LEGAL:
Meg Davis
Marisa Piattelli
Kristina Verner
Chantal Bernier (remote)
George Takach

1. Opening Session
a) Call to Order: Michael Geist

Michael Geist delivered the opening remarks.
Meeting called to order @ 1:04 PM

b) Approval of Agenda

- Moved by Kevin Tuer
- Seconded by Mark Wilson

c) Declarations of Conflict of Interest

- No change since last meeting.

d) Approval of Previous Minutes

- Moved by Charles Finley
- Seconded by Mark Wilson**:** November minutes
- Previous minutes approved by the panel.

2. Chairs Remarks:
Michael Geist welcomed the panelists and visitors and invited. Waterfront Toronto's Chief Strategy Officer Marisa Piattelli, to provide an update on recent developments.

3. Management Report

Marisa Piattelli: Auditor General's Report

M. Piattelli informed the panel that Waterfront Toronto was originally scheduled for a routine audit in 2017. However, it was delayed until 2018. Waterfront Toronto was one of 14 Provincial Agencies audited during this cycle. The audit was completed over a ten-month period and dates back to Waterfront Toronto's inception.

In the report, the Auditor General highlights a number of key gaps that have hindered Waterfront Toronto's ability to conduct its work, including a lack of base funding, a complex governance model and mandates that overlapped other agencies on the waterfront. The audit also contained an analysis of the Quayside project which provided constructive and forward-looking recommendations.

The report contained ten recommendations, including specific items relating to about process, risk management, and project management. Waterfront Toronto has or is already implementing the recommendations contained within the report.

Of particular interest to the Digital Strategy Advisory Panel would have been the 10th recommendation which recognizes the importance of the issues and concerns over data privacy and digital governance. There is a recommendation that the Ministry of Infrastructure consider the creation of advisory council comprised of smart city/digital/data experts, and that the Province conduct public consultations to develop a 'smart city' policy framework. Waterfront Toronto is interested in the elevation of this conversation across the province, and as a tri-government agency, across all three levels of government. Waterfront Toronto welcomes all government engagement on this file, and is seeking input and broad cooperation from departments.

A. Clement asked for clarification regarding whether or not the recommendation to have a policy framework in place was a prior condition (personal interpretation), to the development of subsequent proposals? He further recommended that Waterfront Toronto should develop its own policy framework for the project that can address evaluation and inform efforts of SWL.

M. Piattelli clarified that it was not the interpretation of Waterfront Toronto that the policy framework needed to be developed a priori or could be done concurrently with the work underway. However, the Auditor General has raised this as a requirement for smart city work throughout Ontario, and therefore the Province must mobilize itself in terms of creating a policy framework to address the issues raised.

Waterfront Toronto has been establishing an evaluation framework which will be discussed later in the agenda.

K. Verner also indicated that a set of broader principles that build off of principles within the PDA are currently under development and will hopefully be presented early 2019. These principles are being developed independently from the Quayside Project and would address any waterfront development that integrates smart city methods.

A. Clement cautioned that a framework that can provide guidance to the SWL project is essential and will be a necessary precondition for the proper development and assessment of a plan. Waterfront Toronto needs to ensure it has the capacity and expertise to conduct this work before the evaluation of the MIDP.

K. Verner acknowledged that Waterfront Toronto understands this sensitivity and is working to gather the necessary resources to address this subject. The corporation has its own workstream around this policy piece separate to MIDP and believes there is sufficient time given what the current MIDP timeline looks like.

With regard to the resourcing question, in addition to the external consultants and assembled, Waterfront Toronto is currently recruiting for a Manager, Digital Governance. The successful candidate would have a public policy background to help this panel, while deeper technical expertise will be acquired on a contract basis.

DSAP Panel recruitment is also and panelists were encouraged to share the opportunity with others that may be interested. The goal is to have new panelists on-boarded for the February meeting.

The first Civic Lab was also conducted regarding broad Digital Governance issues. The event was live streamed and recorded so that the content would be available for viewing to the public. Key outputs were published on Waterfront Toronto website and also included a series of information sheets to help raise understanding about these key issues. The next Civic Lab is anticipated to be the 3rd week of January and will focus on the data trust work Waterfront Toronto is undertaking with MaRS.

Roundtable 4 for the Quayside Project occurred on December 8, 2018. 450-500 people attended some combination of the two plenary and 4 breakout sessions. A formal report will be released in the next 2-3 weeks, with recording and video available online.

M. Wilson noted that the digital governance sessions at the roundtable were ambitious and felt rushed. There were complex use cases and participants would have benefitted from more time and expertise to work through the scenarios.

C. Finley reinforced the fact that given the scope of the Quayside project, literacy levels around the key issues vary. More time and opportunity for dialogue should be incorporated.

D. Dame asked what feedback mechanisms were put in place for these panel discussions?

M. Davis clarified that comments were captured throughout the event and there was a post-event opportunity for comments through the website. There were also feedback boards were available outside of session rooms and an exit survey.

K. McBride noted that there needs to be visibility into the evaluation and business models as this is unclear. He indicated that he had concerns over being reactive with making decisions regarding value creation and business models. Setting up the standards first such as with digital governance is important. Waiting for an answer to comment on limits the ability to maneuver and a values framework should be established.

M. Davis indicated that Waterfront Toronto is still awaiting key information from Sidewalk Labs on the value creation piece.

K. Verner recommended that the notion of value creation and business models be deferred to a future subcommittee meeting.

D. Dame and T. Scassa reinforced the importance that public materials need to be digestible and noted that the challenge with digital literacy might be associated to material being presented in a way that is not easily digestible.

A. Clement noted the importance of documenting feedback so all contributions that any participant makes should be document and have a response to let people know that they are being heard. Seeing that remarks are taken seriously and are addressed in a systematic way should be an essential part of the process.

4. Data Trust Engagement with MaRS

Joe Greenwood from the MaRS Solutions Lab provided an overview of the engagement between Waterfront Toronto and MaRS regarding Civic Data Trusts. The purpose is to to synthesize and clarify a topic that is still relatively abstract and provide a foundation of information that can be used to spark future discussion. The primer will be a public document available online. To support the development of the Primer, a workshop was held on

November 27th. 36 participants across a variety of sectors attended. The primer is anticipated to be released publicly on January 14th, followed by a Civic Lab on the key issues.

M. Wilson asked if the practicality of operational models would be examined, including audit enforcement mechanisms?

J. Greenwood indicated that the research will not be prescriptive but rather highlight examples with different combinations (business model, technical implementation etc.).

K. Tuer inquired as to the role of the average citizen in this part of the process since those who we are trying to help with may not be able to participate due to a lack of understanding or access. T. Scassa further stated that there is a need to acknowledge a process for discovering outliers and those not being represented.

J. Greenwood indicated that while there was not public participation in the workshop, there was universal recognition that this was essential. The workshop was intended to be a synthesis of expert advice to consolidate into a clear(er) vision, a primer for explaining a complex entity.

A. Clement highlighted the enabled citizen use case that emerged during the workshop which addressed the already existing sensing network that is already collecting data for private actors.

K. McBride noted that while the structure of the trust is important, the key question is why would someone put data in the trust? Can a data trust deter the monopolization of data? Is that their purpose?

C. Finley commented that maintaining citizens interests, not those of government, private etc. should be the primary position of this trust. It is also important that it not focus solely on data, but rather the full technology and intellectual property layers. It should be a civic, not government data trust, that is citizen led and citizen controlled, their interests should be held paramount.

K. Tuer reminded the group that we cannot lose sight of the economics. There is a balance where civic works together with business. If a company applies to collect data but doesn't provide benefit to the civic realm, then is it permitted?

5. Waterfront Toronto's Evaluation Process & Criteria for the MIDP

M. Davis presented the overall process and objectives that are guiding Waterfront Toronto's evaluation work. There has been a 5-step process for creating evaluation criteria. She reinforced that there will be no decision made until all levels of government have submitted their inputs and clarified that the timeline targets are only targets. More time is taken if the project is not ready.

High-level objectives were outlined in the RFP. Feedback on evaluation criteria will be released. Evaluation framework will be made public as it must be presented to the board.

Committee members reinforced concerns that the current timeline may not provide for sufficient review opportunity and should be adjusted.

A. Clement specifically highlighted concerns raised through the Auditor General's report regarding previous timelines and criticisms of the previous processes. He expressed concern that there is a lack of understanding regarding the breadth of what Waterfront Toronto has taken on and that policy will need to be developed with partners with the provisional proposals from Sidewalk Labs as one of the inputs. He reinforced the need for a policy framework that would feed the evaluation framework to guide the process moving forward.

M. Davis reiterated that these types of concerns are why the Digital Strategy Advisory Panel has been put in place. K. Verner also noted that Waterfront Toronto is not a regulator or policy maker, and the Corporation is aware that this is work that needs to be done with all three levels of government.

K. McBride expressed the fundamental dissonance of the core of democracy and being able to change one's mind with the traditional methodology of building technology architectures. Given the relative rigidity of the architecture, it is essential that the right decisions are made, since the policy environment that surrounds the architecture will endure for decades.

Panelists discussed the need for the City's evaluation to be considered in the overall timeline so as to avoid duplicative processes. The need for sufficient review time is critical since those who will be reviewing the Master Innovation and Development Plan will be trying to evaluate almost two years' worth of work from Sidewalk Labs. Concerns were raised regarding the potential length and complexity of the proposal and panelists recommended that Sidewalk Labs consider smaller bundles of information, delivered earlier to help improve the process. There needs to be transparency and accountability on the feedback and consultation process to ensure that it is a sincere and authentic process.

J. Treviranus reinforced her concerns that a smart city project such as this can automate and increase digital disparity. There needs to be consideration for matters of digital equity.

The discussion of the digital evaluation criteria was deferred to the appropriate subcommittee.

A short recess was held from 3:01pm to 3:11pm.

6. Sidewalk Labs Technology Update

Commons App
P. Ramaswami introduced the notion of the Open Commons app, which has a goal of modernizing public realm studies. Sidewalk Labs worked with local organizations to discover ways that they can streamline data processes and to shorten the chain of processes, so that modeling and public space can adapt and change to the needs of people.

A. Clement noted that Google's collection of locational data for transit and congestion is a great use. However, he expressed concerns regarding the use of background location settings being embedded in the app and whether or not there would be later opportunities for data to be combined with other sets by Google without consent of the user.

P. Ramaswami clarified that Sidewalk Labs does not have access to Google's data streams. They are separate entities, and Google also would not have access to the data generated through Commons. He also clarified that the app is for use by volunteers at the park performing the observations, not for end users. He reinforced that Sidewalk Labs understands the importance of privacy and has committed to Privacy by Design in all their products. They also committed to moving forward with full disclosure via the Civic Data Trust, to ensure purpose and transparency for any proposed digital applications.

T. Scassa noted that this application sounds like participatory GIS, which is common amongst university studies/research. She inquired whether the apps at Quayside need to be created by Sidewalk Labs or whether they could be provided by other third parties. She also inquired about the enforcement of the data trust rules for third parties, including universities that choose to physically locate on the site.

P. Ramaswami responded that Sidewalk Labs is committed to open standards, plug and play architecture, that allows for this ecosystem to be available to third parties. He noted that the district is not meant to be restrictive, but that there is a desire to have a standard set of guiding rules for all parties that are a part of that community.

G. Takach clarified whether all data collected on the Quayside site would become accessible only through the data trust?

C. Nevill-Manning indicated that public realm data should be available for public use, but ultimately this is something that the data trust would have to decide.

M. Wilson recognized Sidewalk Labs for their support of the Thorncliffe Park Women's Committee and using the Gehl standard and urged the Panel to be aware of the public benefit that is gained from this initiative.

Mobility

P. Ramaswami then moved onto the second use case focused on mobility. The use case is intended to help use tech to make streets safe and efficient while respecting personal privacy through the use of smart street lights, digital signage and traffic cameras that are de-identified at source and detecting movements for speed through the intersection. Sidewalk Labs is trying to reduce congestion and increase safety at the curb.

For the solution, the API will be publicly available allowing for traffic administrators to change the signages, rates, etc. This also puts 3rd party apps on the same footing, allowing them to plug and play in Quayside.

C. Finley asked if Sidewalk Labs plans to build and manage this software, or is this something that the public sector will provide?

P. Ramaswami responded that it is likely that some parts of the solution such as mobility management system will be built by Sidewalk Labs, although parts of the system will need to be provided by others. Sidewalk Labs will not be able to build everything. He noted that many hardware components already exist (sensors), allowing companies like Miovision and others within the local ecosystem to be integrated into the community.

C. Nevill-Manning added that the software for the mobility management system will be subject to replacement by better systems as appropriate. The system is being designed in such a way that each component of the system could be replaceable to ensure the city is not beholden to one provider (vendor lock-in).

M. Wilson noted that he would like to see device standards integrated onto the visuals presented and inquired about the status of the business case to see if it has been determined whether integration of this much technology is economically viable.

P. Ramaswami responded that one of the mechanisms they are developing, a standardized mount for sensors, would help to lower the costs associated with these projects and would allow for easier integration and adaptation of new technology.

K. McBride sought clarification on the rules and logic that resides in the API and expressed a desire to better understand its architecture. Moreover, he sought clarification on whether this would be an open source layer that allows third parties to integrate as new standards come in or if Sidewalk Labs would be responsible for implementing the new standards?

P. Ramaswami noted that while much of the solution is still in development, Sidewalk Labs is searching for existing standards that may inform how the API functions. He noted existing open standards being used in the community and note that this is an area that they anticipate the Civic Data Trust will have some responsibilities for. The API layer will be published to allow people to understand how it works, but it is unclear as to whether it will be open source due to the potential security implications. However, they do not see this as creating a lock on the system.

C. Nevill-Manning added that they are not creating a a monolithic API connecting the mobility management system to the dynamic sign. The mobility system might have/require the correct key, to access the signage API and send commands. He noted that they are still in the prototyping phase and it is a challenge to provide details at this time.

K. McBride inquired if this implies that the API layer is a key management system that maps who can see what and who can get what?

P. Ramaswami clarified that this is still an open question. It has not yet been determined if the key lies within the API, or with the governance body. C. Nevill-Manning added that digital certificates/zero knowledge proofs do not require centralization, but it does require the dynamic sign and mobility management system to agree on a set of infrastructure(s) that are trusted.

K. McBride reinforced that the business logic is something DSAP needs to understand further. Unpacking how the API will function will require a deep dive.

C. Nevill-Manning added that Sidewalk Labs still needs to start building the API to be able to get into further detail and would welcome the opportunity to work with DSAP members as appropriate on the prototyping phase.

A. Clement complimented Sidewalk Labs on their investigation of using zero proofing systems and indicated a desire to see all the data flows that go into this mobility system/digital layer. He asked whether Sidewalk Labs will be adding tertiary data sets into the mobility model?

P. Ramaswami noted that adding external data to a system is something that would have to go through an RDIA process and external governance body (trust). C. Nevill-Manning added that the digital layer is not one monolithic entity, but rather a collection all elements. He reinforced that the digital layer can be best explained through the individual use cases, because data flows/infrastructure will vary for each use case.

K. Tuer noted that the public explanations of the solutions must use common language. He also indicated that the data trust should be featured in the solution diagrams, so people can better understand a trust's purpose and how it functions in this network.

P. Robinson observed that this seems to be the missing middle for other solutions that Sidewalk Labs has spoken of in the past such as Coord and Replica. She noted that it would be valuable to discuss the interplay of the tools will being developed and whether they will work together.

P. Ramaswami remarked that last year, integration of all of the systems seemed like the course of action. However, public engagement has informed that this may not be the correct approach. Regardless, if it is pursued then it would have to go through the proper processes. C. Nevill-Manning added that other third parties can take data from Quayside

and combine with other publicly available data. However, he cautioned that when considering the collection of data, we must keep in mind the potential impacts of data sets being merged with others, to safeguard inability for re identification.

P. Robinson raised a concern that if the solutions begin to create a path towards exclusivity and the requirement for the purchase of other products Sidewalk Labs or Google produces, this would create a procurement challenge and would need to be flagged to government. She noted that these types of connective systems can be considered more of a governance than digital issue.

C. Finley recommended providing user journeys that demonstrate how the various systems will work to help increase understanding.

C. Nevill-Manning agreed and reminded the Panel that Sidewalk Labs has always stated that they are not looking for creating or implementing technology for technology's sake. There is a central purpose of all of the systems they are considering focused on improving quality of life. One of their first considerations is whether technology is even necessary for improvement, as well as the minimum amount of data that is required.

Building management system
C. Nevill-Manning introduced the concept that Sidewalk Labs is exploring to better understanding the energy usage in buildings, and how to increase efficiency. In the solution data collected from third parties is standardized, then feeding into machine learning to provide instructions back to the equipment. All of the data is aggregated and deidentified to allow for it to be used as open data/externally available. By averaging parameters allows for model to improve without having the measurement data leave the apartment.

Wrap Up
K. Tuer noted that this is the first time that the conversation combines governance, value proposition and purpose. This is showing how Sidewalk Labs is thinking about their solutions from the citizen up. These use cases allow us to finally have useful conversations.

A. Aston noted that the session provided a lot of information in a limited period of time and recommended the use of collaboration tools during the presentation to increase efficiency with time management and documentation.

K. Verner committed to securing a tool for future meetings.

C. Finley raised a concern regarding potential bias in optimization and the need to understand how and expose what has already gone through the optimization process?

M. Geist noted that the public materials include responses given to previously submitted questions and recommended that a similar process be used moving forward.

7. DSAP process for MIDP review – Deferred until January meeting.

8. Other Business

9. Adjournment

- Moved by Mark Wilson
- Seconded by Andrew Clement

Meeting adjourned at 4:15pm

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WATERFRONToronto

JANUARY 17, 2019

Management Report

Kristina Verner, Vice President, Innovation, Sustainability & Prosperity

FILE WILL BE UPDATED ON JANUARY 14, 2019

Developments since December 13, 2018

WATERFRONToronto

Data Trust Primer

- Purpose: To explain as simply as possible how a civic digital trust could responsibly share smart city data and algorithms
- First draft completed and in circulation amongst contributors and workshop attendees.
- Public launch in January 2019.

DSAP New Panelist Recruitment

- We are extending our recruitment window to January 31, 2019, given the impact of the holiday season.

Manager, Digital Governance

- Applicants have been shortlisted and are being contacted for first round interviews.

Civic Labs

- Additional Civic Labs and public programming are being scheduled. An update will be provided at the IREQ meeting.
- NOTE: THIS DECK WILL BE UDPATED PENDING A MEETING REGARDING THIS ITEM ON JANUARY 11, 2019.

Toronto Region Board of Trade Report

- Released January 9, 2019
- Intended to elevate these conversations regarding data governance beyond the Quayside project to a more regional discussion.
- Waterfront Toronto is interested in looking at all options that serve the public interest and would welcome the opportunity to work collaboratively with the Board of Trade and Toronto Public Library as these discussions progress.

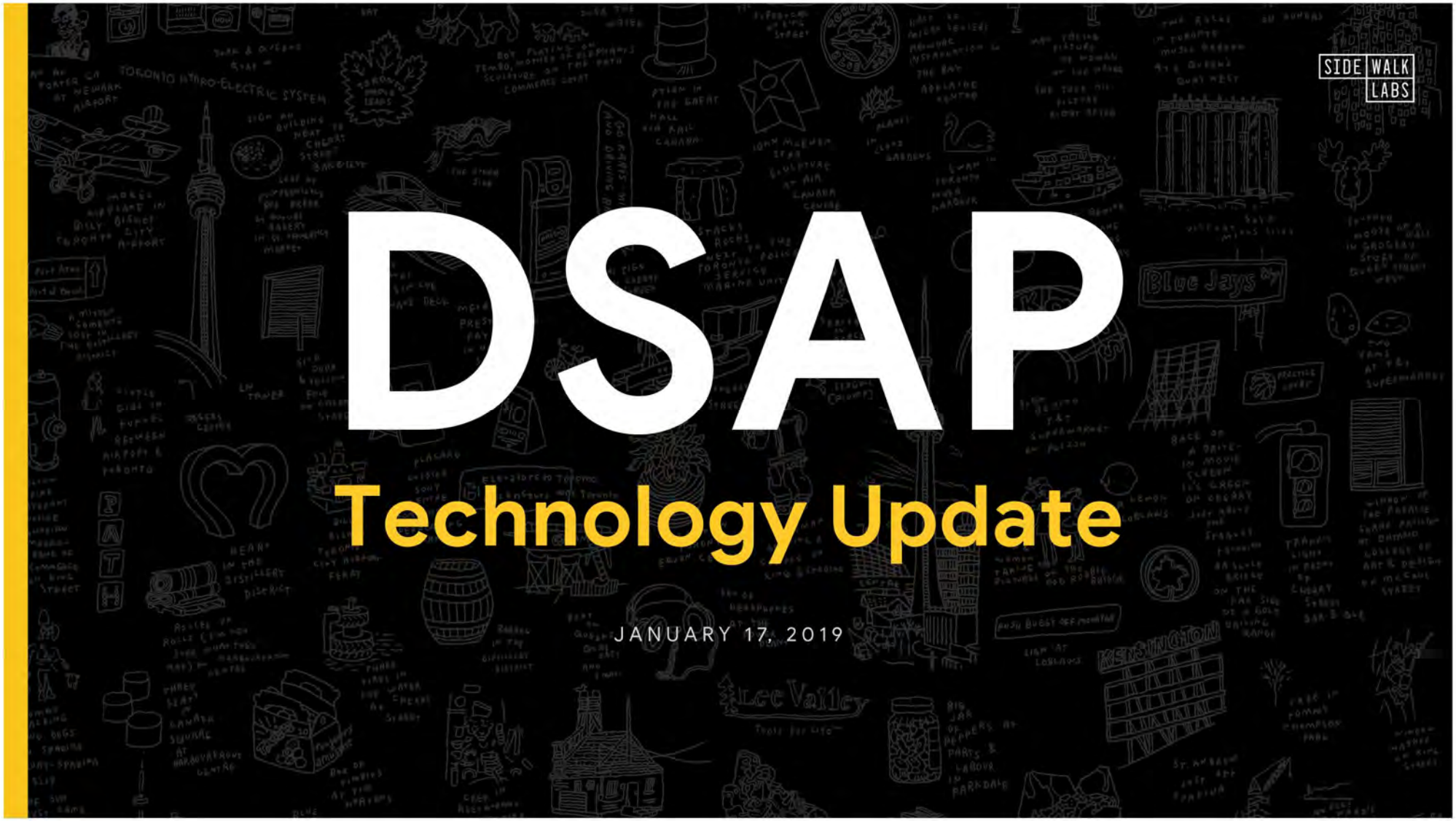
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Thank you.

Waterfront Toronto
20 Bay Street, Suite 1310
Toronto, ON M5J 2N8
www.waterfrontoronto.ca

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SIDEWALK LABS
DSAP
Technology Update
JANUARY 17, 2019

DSAP

Recap of December 13th Presentation

SIDEWALK LABS

Review data use case that we have field tested

1. **CREATE** vibrant, well-managed public space for communities

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Discuss future data use cases possible in Quayside

(Illustrative examples for discussion)

2. **REDUCE** congestion and create safe streets
3. **REDUCE** energy use in homes and offices
4. **Collect & Manage Water More Effectively**

Today: Digital Components that Support Multiple Use Cases

SIDEWALK LABS

01	**Neighbourhood-Scale Software-Defined Network** • Personal private networks • Higher security • Better management	NETWORKING
02	**Super Passive Optical Network** • Higher-capacity, more efficient fiber use • Easier upgradability	HARDWARE
03	**Koala™: Standard Outdoor Mounts with Power & Connectivity** • Reduce time, cost and disruption of deployment • Increase rate of innovation	
04	**Open Data in Standard Formats via Standard Interfaces** • Enable innovation • Significantly reduce vendor lock-in	SOFTWARE (for next time)

DSAP | January 2019

Where We Are Today

SIDEWALK LABS

2018 / 2019 / 2020 / 2021 / 2022 / 2023...

We are early in our overall product development cycle.
This work reflects the most current perspective from our team.
We will continue to refine as we learn from customers and initiate pilots.

Responsible Use of Data

Throughout our development process, we will be committed to the responsible use of data, such as privacy by design principles, even as we consult on a broader data governance policy for Quayside, such as our proposal for an independent Civic Data Trust.

We Will Use Published Standards

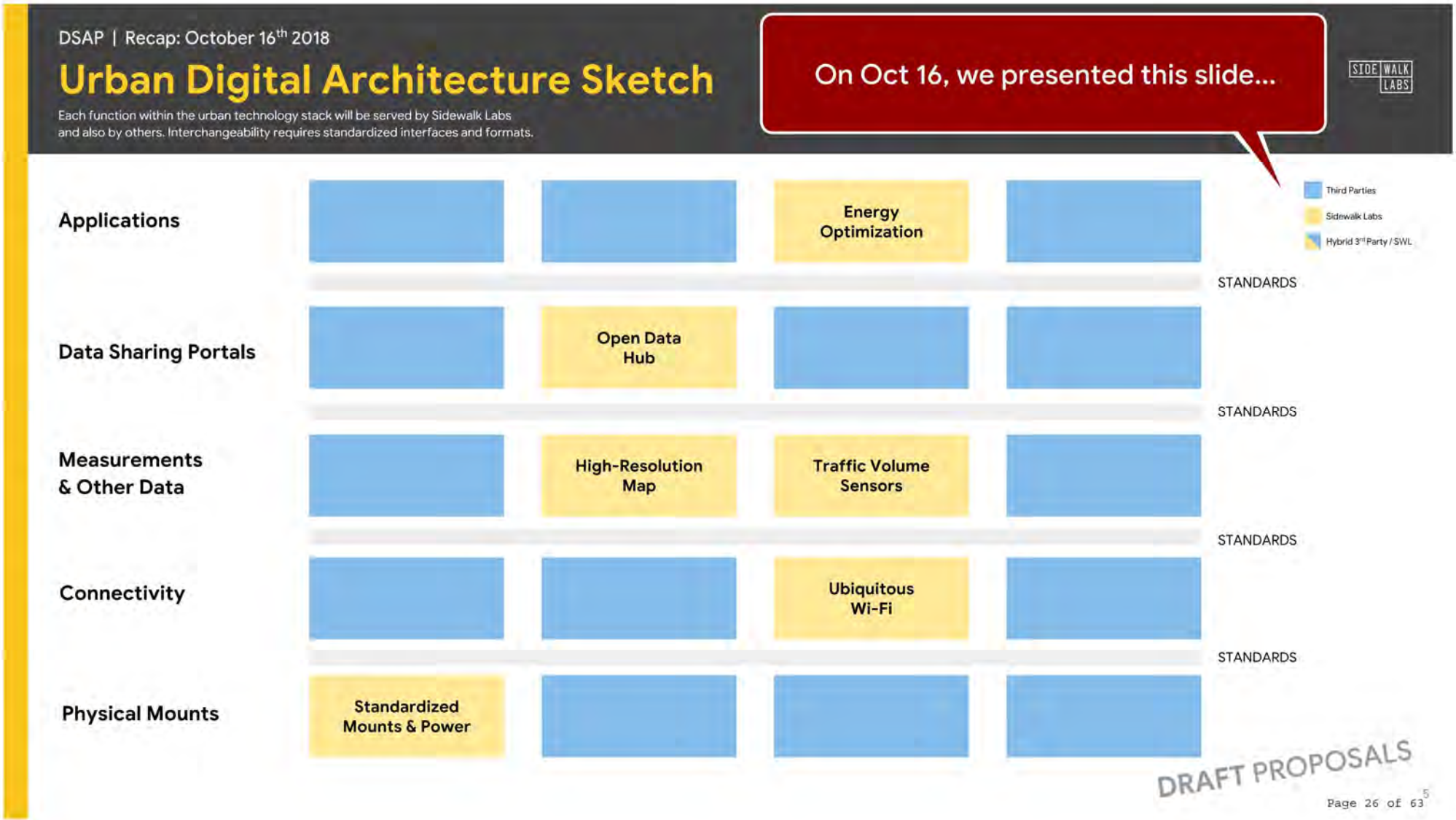
The ideas we are describing will use published standards.
We will be engaging partners with whom we hope to develop and deploy these ideas and ecosystems.

DSAP | Recap: October 16th 2018

Urban Digital Architecture Sketch

Each function within the urban technology stack will be served by Sidewalk Labs and also by others. Interchangeability requires standardized interfaces and formats.

On Oct 16, we presented this slide...



DSAP | January 2019

Urban Digital Architecture Sketch

Each function within the urban technology stack will be served by Sidewalk Labs and also by others. Interchangeability requires standardized interfaces and formats.

Since then, it has become clearer that some components that we thought we might have to build ourselves will likely be able to be provided by third parties.



DRAFT PROPOSALS

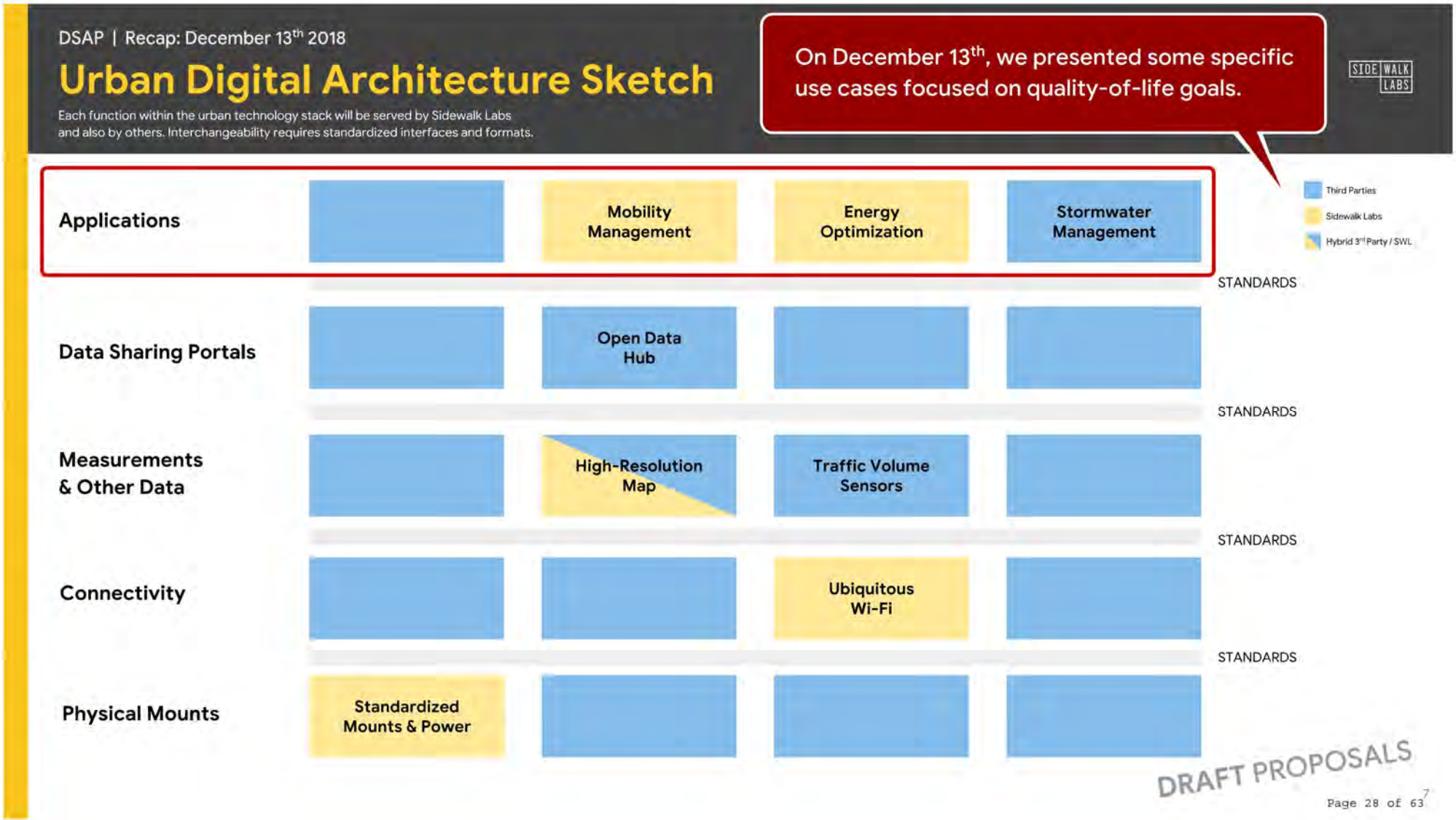
Page 27 of 63

DSAP | Recap: December 13th 2018

Urban Digital Architecture Sketch

Each function within the urban technology stack will be served by Sidewalk Labs and also by others. Interchangeability requires standardized interfaces and formats.

On December 13th, we presented some specific use cases focused on quality-of-life goals.



DRAFT PROPOSALS

Page 28 of 63

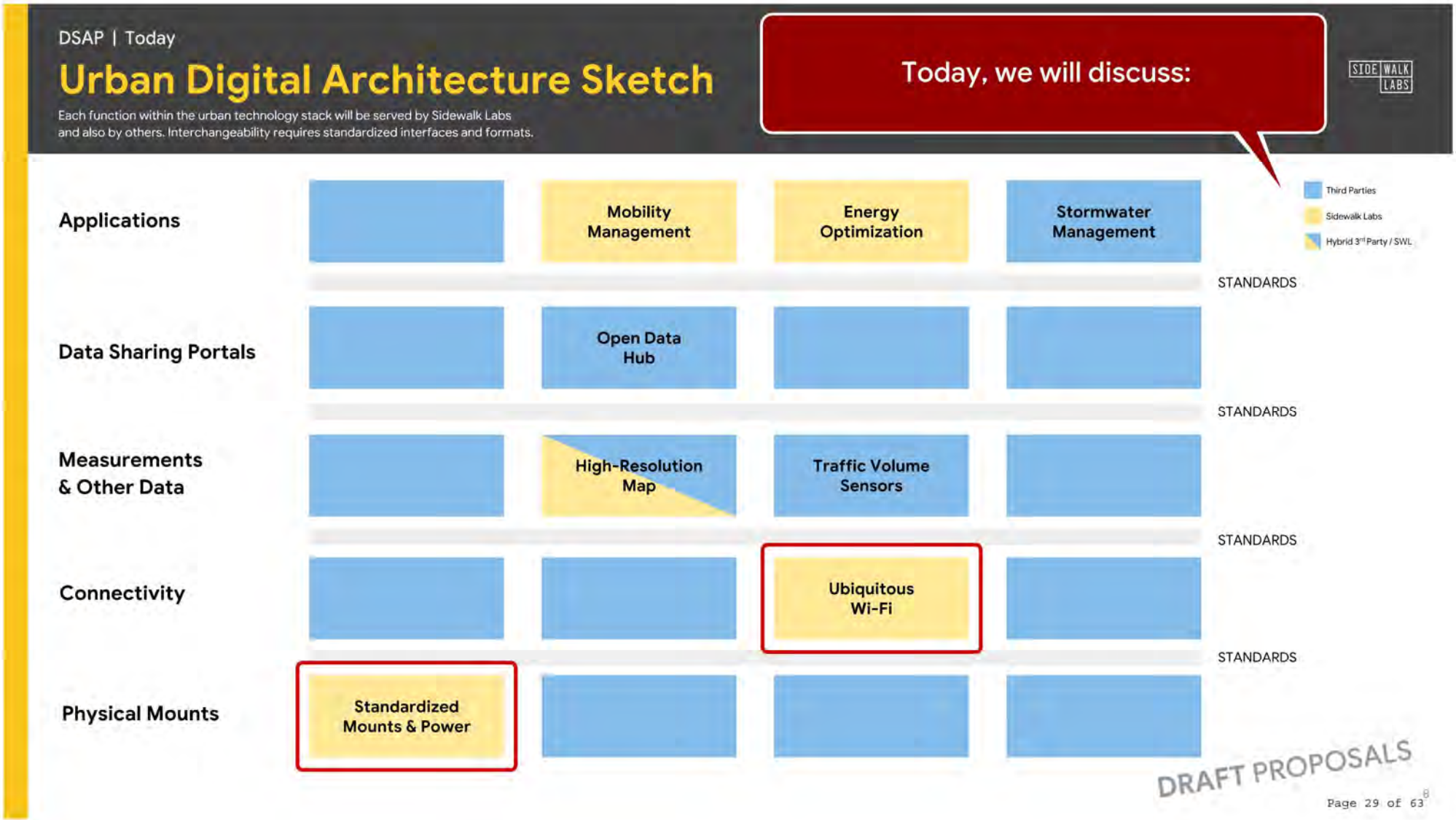
DSAP | Today

Urban Digital Architecture Sketch

Each function within the urban technology stack will be served by Sidewalk Labs and also by others. Interchangeability requires standardized interfaces and formats.

Today, we will discuss:

SIDEWALK LABS



DRAFT PROPOSALS

Page 29 of 63

DSAP | Next Panel Presentation

Urban Digital Architecture Sketch

Each function within the urban technology stack will be served by Sidewalk Labs and also by others. Interchangeability requires standardized interfaces and formats.

... and for our next panel presentation

SIDEWALK LABS



DRAFT PROPOSALS

Page 30 of 63

DSAP

Quick Aside: Ownership

The first two sections address fiber infrastructure and network topology.

We plan to work with existing providers to introduce these new technologies and build on the work done to date by Waterfront Toronto.

As with all digital infrastructure, **residents and businesses would not be required to use these solutions.**

01
Neighbourhood-Scale Software-Defined Network

02
Super Passive Optical Network

03
Koala™ Standard Outdoor Mounts with Power & Connectivity

DSAP

Challenges for Neighbourhood-Wide Connectivity

SIDEWALK LABS

Deploying fiber, connections inside buildings, provisioning residential or business internet connections, and dealing with home routers is very expensive, and often insecure.

The technologies proposed hope to alleviate some of these problems.

Fiber Router



Fiber networks are difficult and expensive to upgrade as technology improves, and often aren't used efficiently.

Home Routers



Maintaining, updating, and debugging home networking equipment is technically challenging, and often falls to consumers

Security Risks



Home routers with default passwords and misconfigured firewalls create vulnerabilities.

11

Today

SIDEWALK LABS

01

Neighbourhood-Scale Software-Defined Network

02

Super Passive Optical Network

03

Koala™ Standard Outdoor Mounts with Power & Connectivity

Neighbourhood-Scale Software-Defined Network

SIDEWALK LABS

Why

- ISPs provide firewalls, which provide imperfect security, while making it very difficult for subscribers to access devices in their homes and office when they're not there.
- Subscribers are currently required to manage their own Wi-Fi equipment, which is technically challenging, results in vulnerabilities, and often results in interference between apartments.
- Internet of Things devices are hard to deploy, and are often insecure.

What

- Software-Defined Networks allow much more sophisticated, customized routing – for example, a private network for each subscriber including their home, school and office, regardless of their location.
- Will integrate with and support emerging 5G networks, as well as managed Wi-Fi access points to create seamless access with minimal interference.

How

- Internet of Things devices can be quarantined if they start exhibiting unusual behavior – trying to communicate with unknown internet endpoints, transmitting significantly more data than expected.
- Managed Wi-Fi significantly improves performance without requiring subscribers to be part-time network engineers.
  - Optimizing Wi-Fi systems with the layout of the city and buildings in mind can be done efficiently at scale.

Small-Scale Evaluation Software-Defined Networks

SIDEWALK LABS

Proof of concept network created at Sidewalk Labs

- Used 12 Raspberry Pis, 4 network switches, and wireless access Points.
- Each Raspberry Pi represents an apartment.

Dynamically managed and modified SDN configuration to simulate what it would be like to take a laptop, tablet or phone to a public park and still be directly connected to systems inside your apartment.



In-house SDN rack with 12 R-Pis for [illegible]

Today

SIDEWALK LABS

01

Neighbourhood-Scale Software-Defined Network

02

Super Passive Optical Network

03

Koala™ Standard Outdoor Mounts with Power & Connectivity

Super Passive Optical Network (Super-PON)

SIDEWALK LABS

Why

- Fiber infrastructure often carries a small number of wavelengths, leading to underutilization of physical infrastructure
- Upgrading the network requires new equipment at multiple points throughout the physical network increasing costs and making upgrades difficult.

What

- Many more wavelengths sharing a fiber, one wavelength per building
- Passive optical splitters at intermediate points
- Each building detects its wavelength only
  - Upgrades only require new equipment at endpoints, not at intermediate points in the network

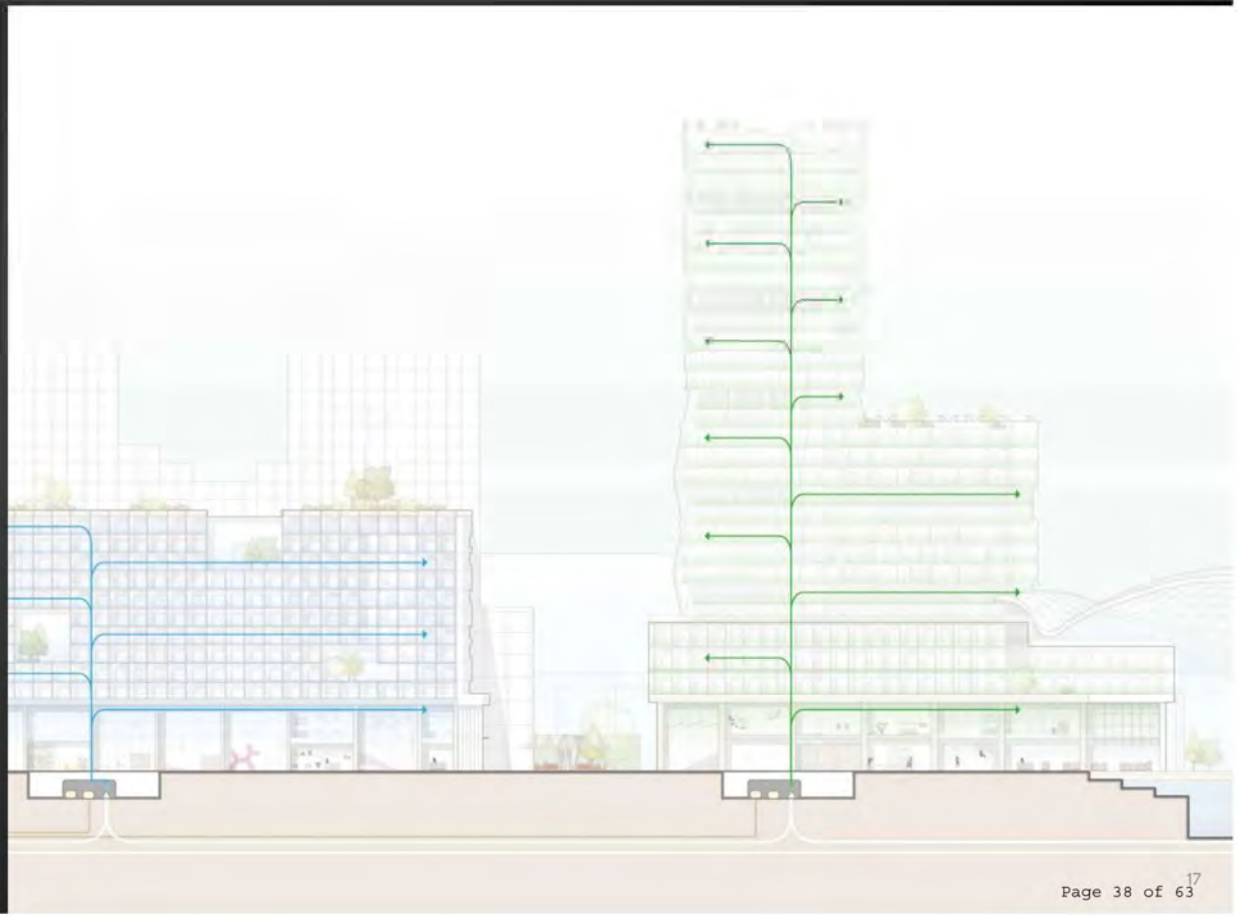
How

- New Super-PON approach, currently under consideration by IEEE 802.3 standards committee
- We plan to work with existing, local companies with experience in fiber deployment and service delivery.
  - We would provide specifications and technical expertise in this new approach

Super-PON + Rainbow Bridge

Each building gets a different wavelength of light. Allows for:

- Reduced cost through reduced infrastructure
  - Less fiber required
  - Fewer network point of presence buildings
  - Less active equipment at intermediate points
  - Reduced power: light is generated at the head end and passive all the way to the receiving end
- Higher bandwidth, despite reduced fiber requirements



Buildings — Proposing New Specifications for This Tech

Sidewalk Labs proposes that buildings conform to specifications that balance the goals of this Super-PON network with the ability for other providers to offer their own network services:

Points of Entry

Multiple point-of-entry locations

Conduits

Incoming conduits meet a set of specifications (e.g. buried depth, distance from water and sewer lines, coating materials, etc)

Meet-Me Room

A single location in the building where all telco-related equipment is installed with backup power and spare capacity.

Typical in commercial buildings, but less common in residential.

Risers

A vertical riser, dedicated to telecommunications wiring, accessible on each floor and designed for increased capacity

Cabling

Cat 6A wiring (or better) to every room for Power Over Ethernet wireless access points.

Today

SIDEWALK LABS

01

Neighbourhood-Scale Software-Defined Network

02

Super Passive Optical Network

03

Koala™ Standard Outdoor Mounts with Power & Connectivity

Koala™: Standard Outdoor Mounts w/ Power & Connectivity

SIDEWALK LABS

Why

- Mounting, maintaining, & upgrading signals and sensors is **expensive, disruptive and time consuming**
  - Avg cost per intersection for Adaptive Signal Control: $20k-30k
- This leads to **slow adoption cycles** for new technology
- Example devices:
  - Lights
  - Wi-Fi access points
  - 5G cell base stations
  - Temperature, wind speed, humidity, rainfall sensors
  - Lidar, radar, other sensors collecting non-personal data

What

- **Flexible, standardized infrastructure** that can host many types of street digital infrastructure
- Similar in spirit to USB, but suitable for the demands of the public realm on street poles

To be clear, the Koala™ is simply a mount and connector, **not a device that collects urban data.**

How

- **Current prototype** (subject to change):
  - Hermetically sealed package
  - 200 Watts
  - **6 gigabits per second** of data through short-range wireless or wired connection.
  - Mechanical mount that is **installable and removable by ground-based operators** with special poles (and in the future, possibly by drone)

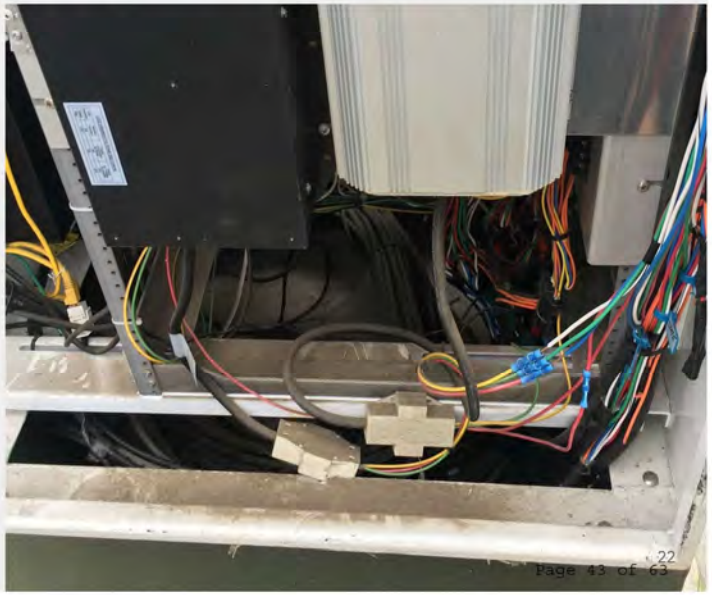
Current Approach



Current Approach







City of the Future?



Koala™ – General Requirements

SIDEWALK LABS

01

Mechanical Security & Ease of Installation / Removal

Infrastructure should be easy to install and maintain: able to be mounted or swapped out within minutes by human operators without large equipment or street closures.

It should also be robust to wind, dust, precipitation, temperature variations and other challenges of the urban environment.

02

Power

Client devices inevitably need power. Some devices, like displays and lighting, may require more than 100 watts of wired power.

Other devices, like air quality sensors, could possibly be powered through solar panels.

03

Connectivity

Most client devices will need to send and receive data. In locations like Quayside with high-quality, reliable wireless connectivity, most devices might not need hard-wired data connections.

If this system used for 5G antennas, a wired connection will be required.



What Else Does Koala™ Provide?

SIDEWALK LABS

01

Security

Physical device authentication and data encryption

02

Civic Data Trust Control

Ability for Civic Data Trust to turn off network or power for devices out of compliance with Civic Data Trust requirements.

03

Ecosystem Development

Standardization and reduction of cost and disruption creates the conditions for a thriving ecosystem of urban technology creators, such as startups, researchers, or established companies.



Using Koala™ Will Not Be a Requirement

SIDEWALK LABS

Devices will not be required to use Koala™, but we hope that the **cost reduction and ease of use make them an attractive option**

Koala™ will be a standard, similar to USB

Device adoption will determine the standard's success



In Summary

Considering device deployment and ubiquitous connectivity at a neighbourhood scale suggests that it should be possible to:

- Make it easier and cheaper to deploy, maintain and upgrade devices that are required to meet quality of life goals.
- Create a higher-performance optical network with lower cost and greater upgradeability.
- Reduce the burden of wired and wireless network management for end users, and largely eliminate interference between adjacent spaces.
- Provide a seamless network across the neighbourhood with secure private networks for each person.
- Work with existing providers to introduce these new technologies and build on the work done to date by Waterfront Toronto.

As with all digital infrastructure, residents and businesses would not be required to use these solutions.


SIDEWALK LABS
APPENDIX
Slides we ran out of time to discuss on December 13th
28

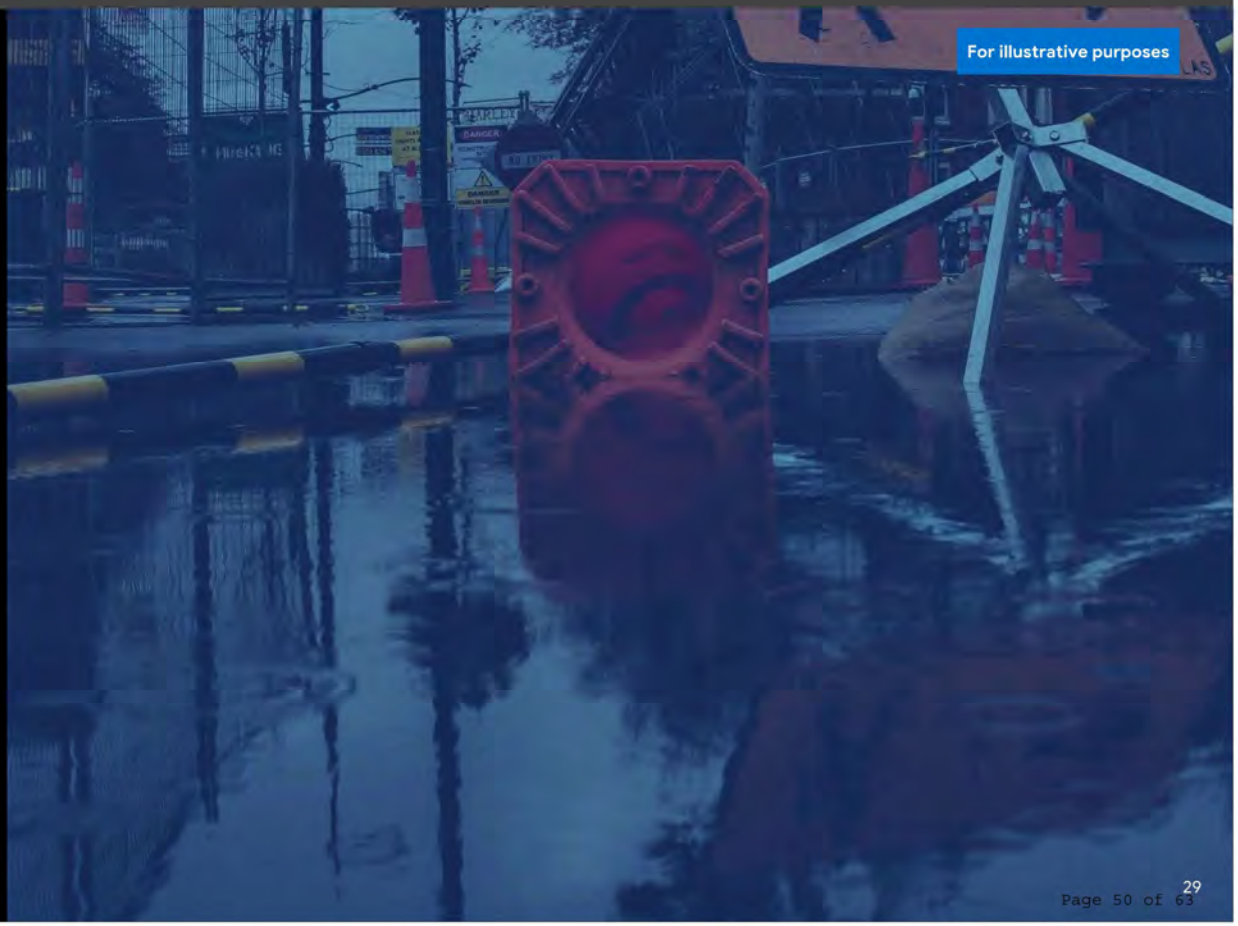
Water Management Challenges in Toronto

A storm in July 2013 flooded Toronto, and resulted in ~$850M in damages.

Stormwater overflows contaminate the Don River basin.

Cities invest in large stormwater infrastructure to account for extreme events, resulting in sizable costs and taking up public space.

Standard monitoring practices are manual and make predictive understanding of the systems difficult.



Making Better Water Quality Possible

SIDEWALK LABS

Stormwater Systems

Provides hardware and cloud-based software to connect, manage, and operate district stormwater systems.

Enables cities and private customers to improve outcomes for water quality & flooding, and reduce costs & environmental damage from stormwater flows.

OptiRTC, a stormwater company, is partnering with Ryerson University Urban Water Institute on a multi- location pilot, including Waterfront Toronto.



For illustrative purposes

OptiRTC manages stormwater infrastructure (e.g., green roofs, cisterns, etc.) to improve water quality and eliminate flooding.

Real-time dashboards monitor systems, and alert managers to upcoming events.



For example, Opti will proactively decrease stored water levels prior to a large weather event, to avoid a flooding.

How It Works for Streets, Parks, & Buildings

For illustrative purposes

SIDEWALK LABS



Responsible Data Impact Assessment for Water Management

SIDEWALK LABS

For illustrative purposes

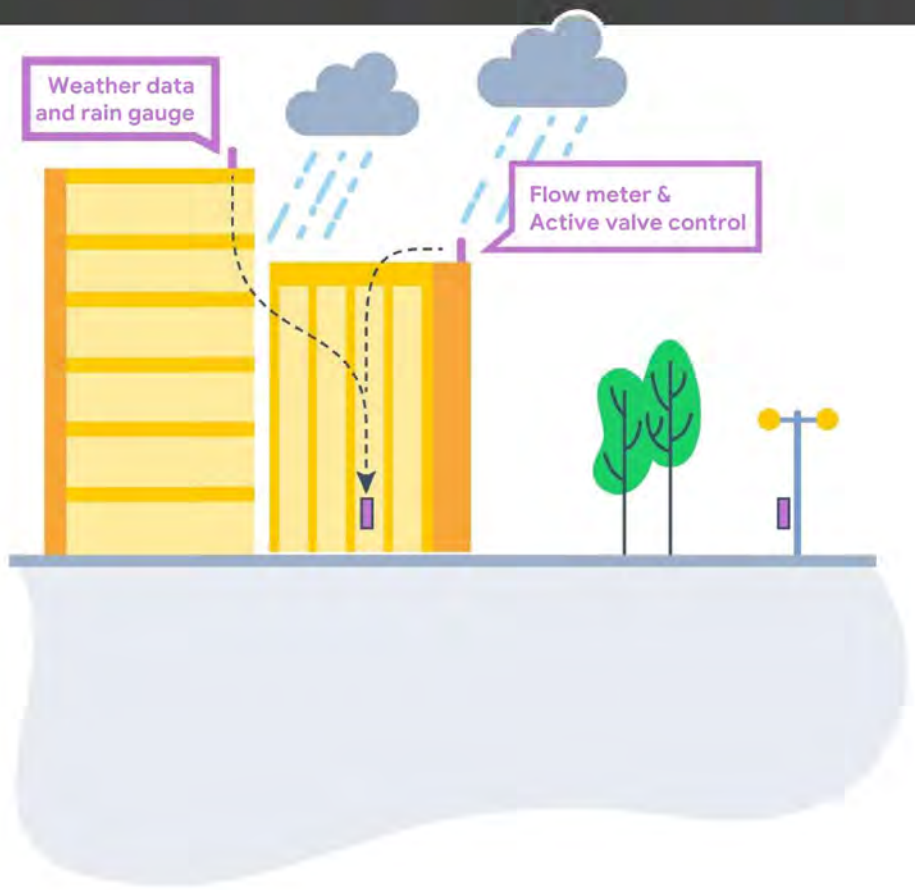
The following slides will discuss data collected by a storm water management system to help prevent flooding.

All the data collected for stormwater management is non-personal information (e.g., information on water levels, weather, etc). Because data is being collected, Opti will adhere to the following privacy by design principles and an RDIA process:

- Opti will publish an RDIA for any data collection for water management.
- As the data is non-personal, this could be a case of self-certification as envisioned in Opti's proposal for a Civic Data Trust.
- Opti will make data collected in the public realm (non-personal / de-identified) publicly accessible.

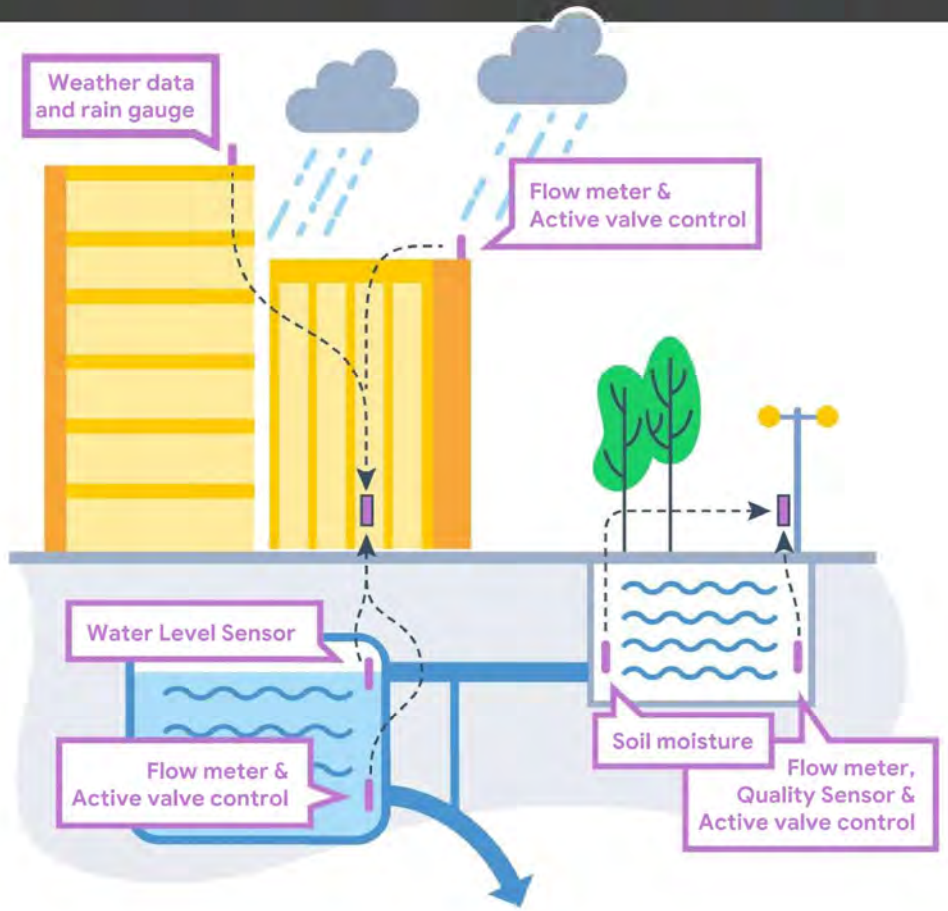
Some of these principles may be affected by or incorporated into data governance policies for Quayside, such as Sidewalk's recommendation for an independent Civic Data Trust, which are the subject of ongoing consultations.

Flow of Data from Water Sources



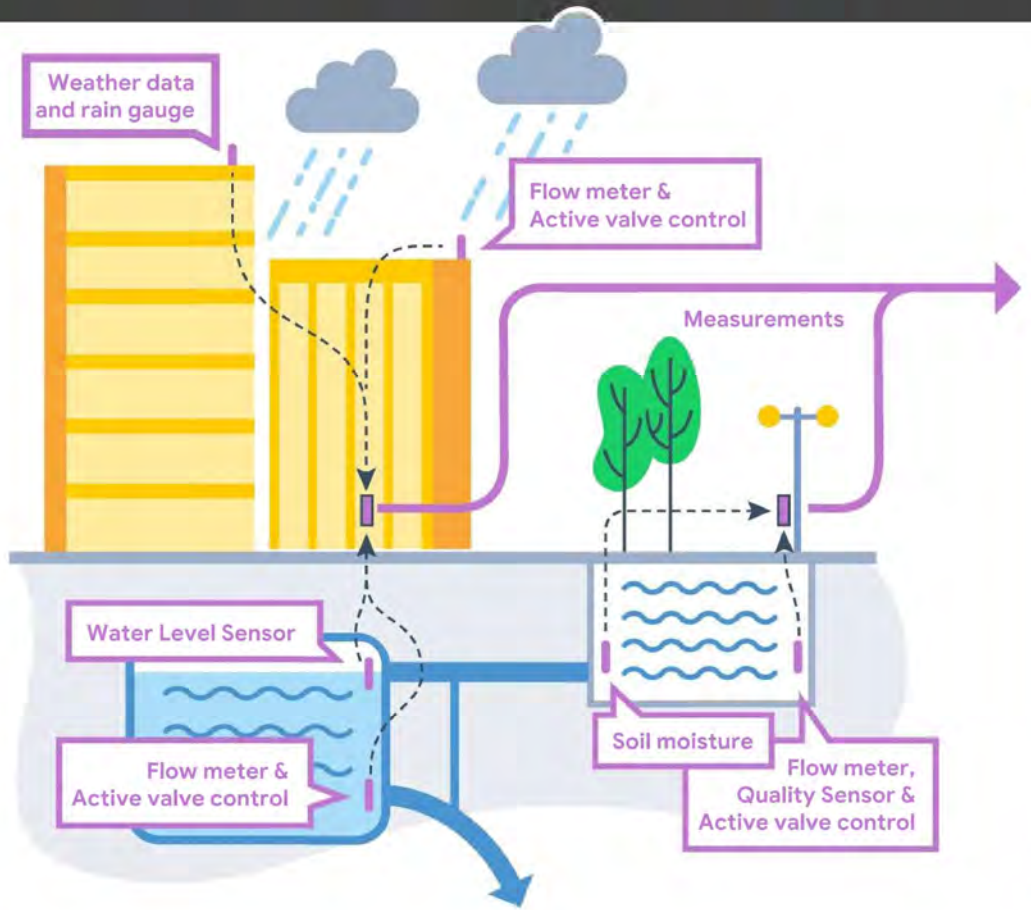
For illustrative purposes

Flow of Data from Water Sources



For illustrative purposes

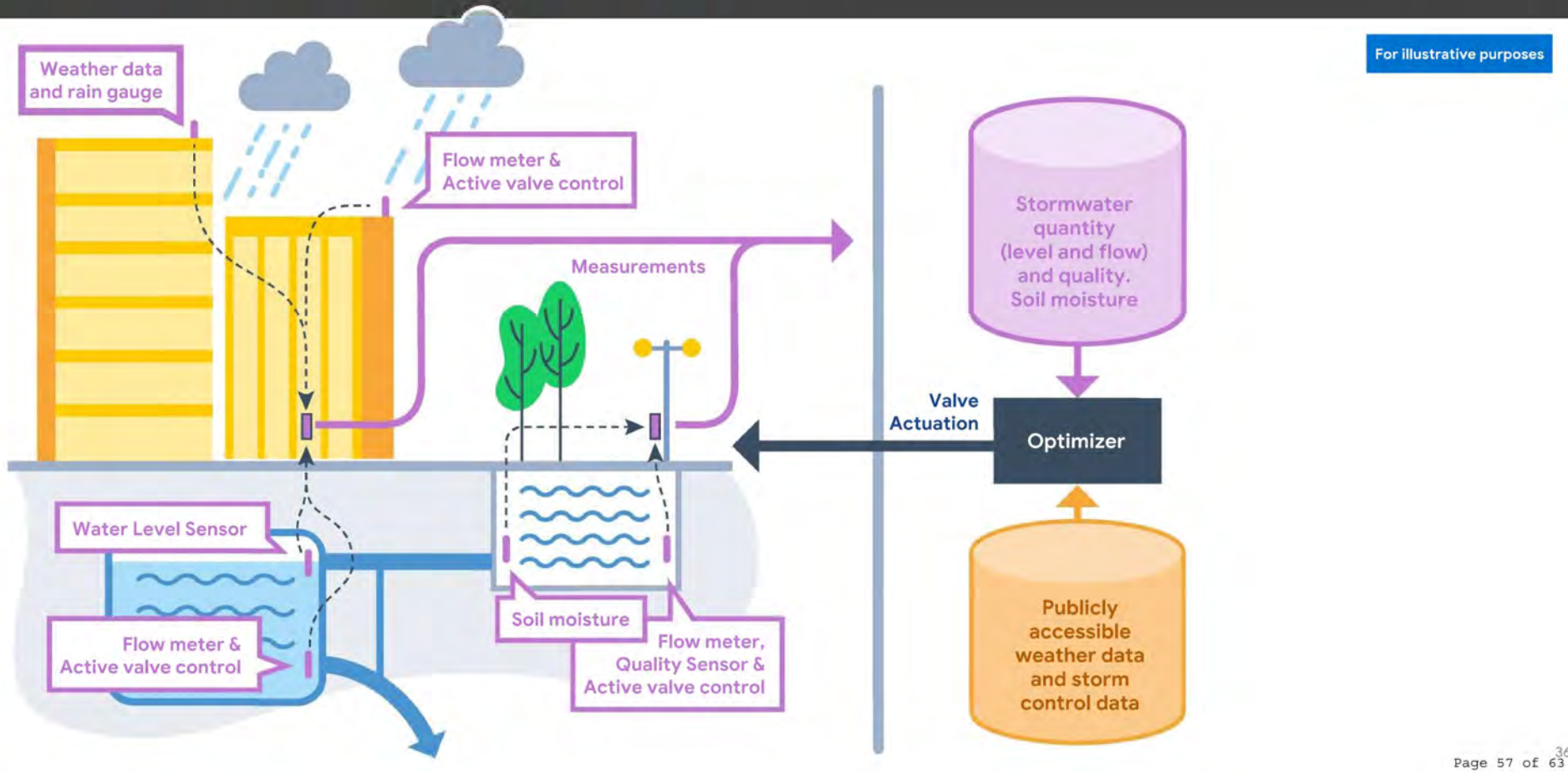
Flow of Data from Water Sources



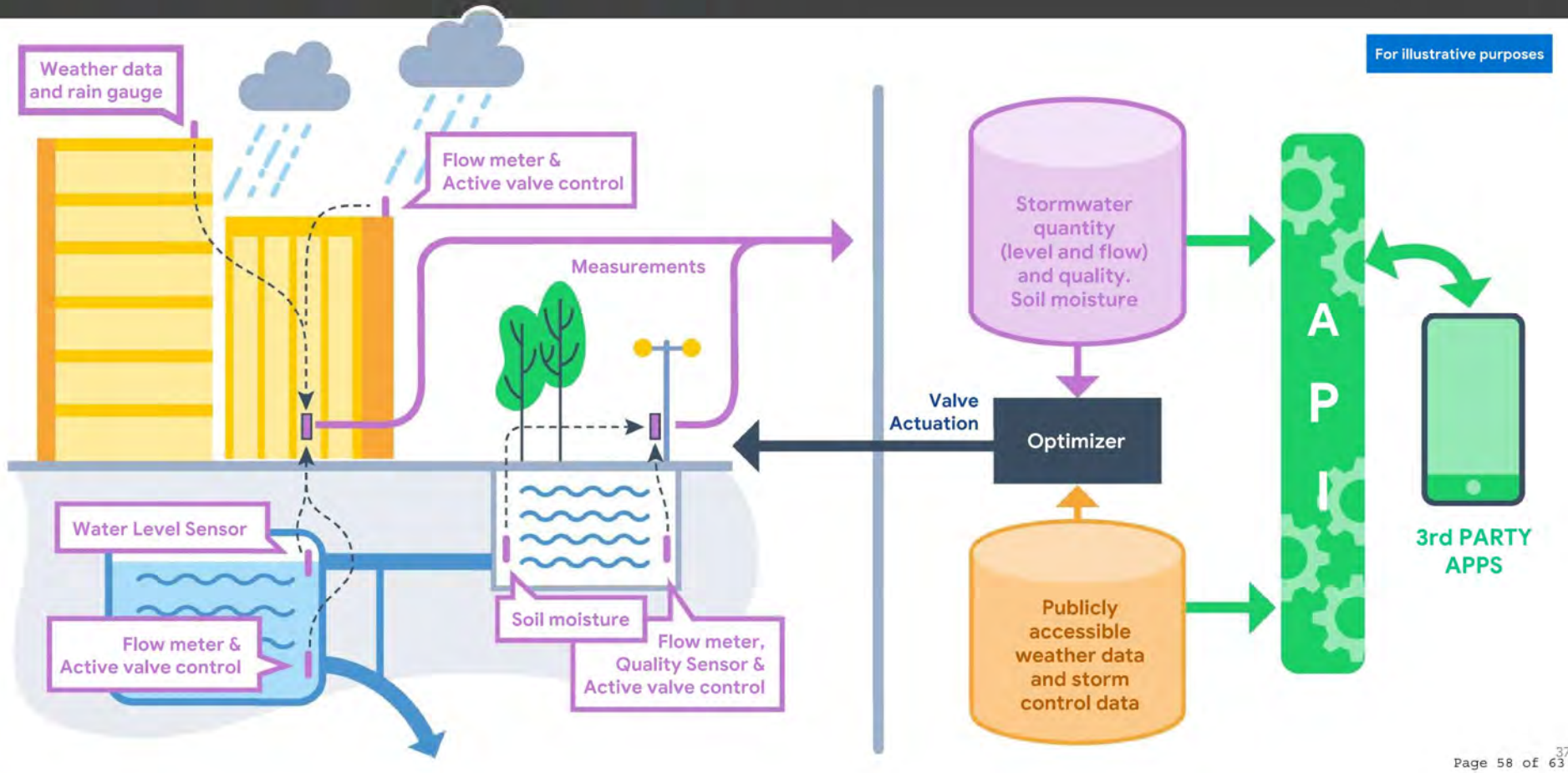
For illustrative purposes

Stormwater quantity (level and flow) and quality. Soil moisture

Flow of Data from Water Sources



Flow of Data from Water Sources



WATERFRONToronto

DSAP - January 17, 2019

Data Privacy & Digital Governance Evaluation Criteria

Kristina Verner, Vice President, Innovation, Sustainability & Prosperity

Data Privacy & Digital Governance

Evaluating the Master Innovation and Development Plan

Kristina Verner, Vice President Innovation, Sustainability & Prosperity

Implementation Requirements

Data Privacy & Digital Governance: A Made in Canada Approach

- Proposals for approaches to protocols that could inform **a new global standard in data governance**
- **Comply** with or exceed of all applicable laws, regulations, policy documents and contractual obligations
- Methods and practices that provide for **meaningful consent** for data collection
- **Data Minimization & De-Identification**
  - Processing should only use as much data as is required.
  - All data collected in the public realm will be de-identified at source.
  - Data collected can only be used for the initial purpose collected. Further uses require additional consent.
- **Data security and privacy**
  - Full compliance with all laws pertaining to privacy that apply to Quayside
  - Commitment to not share or link personal data with 3rd parties - including other Alphabet companies (i.e. Google) without consent
  - Data **cannot** be used for advertising purposes
  - Privacy by Design embedded in all solutions propc
  - Architecture that ensures protection against the unauthorized access or data corruption throughout its lifecycle
- **Commitment and accountability to the ethical** use of technology
- **Shared Benefits of Data** – Data and solutions will be open where feasible and appropriate. Data will be shared with government open data repositories to ensure equitable access and opportunity to benefit.

Implementation Requirements

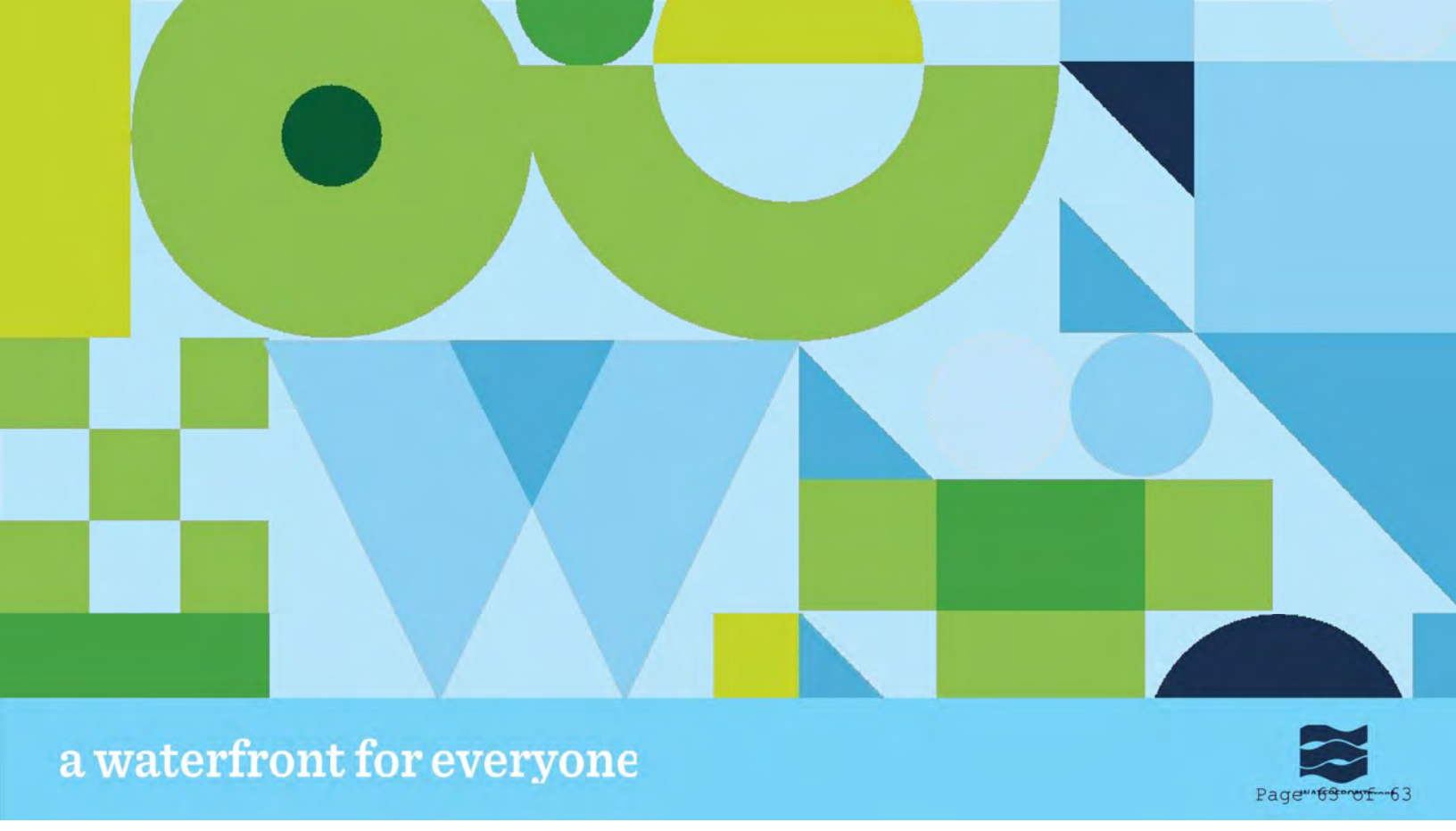
Data Privacy & Digital Governance: A Made in Canada Approach Continued

Open Architecture and Standards Based

- Systems and platforms are designed to be open with - minimal proprietary architecture to foster innovation, promote competition, create freedom of consumer choice.
- Independent components that conform to open standards
- Open APIs (Application Program Interface)
- Data collected is shared as appropriate with government open data catalogues/portals on a free/portals on a free/non-exclusive use.

Data and Technology Sovereignty

- Protocols, standards and operating agreements do not foster monopolies, barriers to entry or lock-in to a specific vendor
- Data independence - The data associated with solutions can be extracted for use with other solutions in the event that there is a need to move to a different platform/solution.
- Jurisdictional localization and equivalent protection provisions consistent with Canadian data protection laws will be incorporated
- Data will be stored in Canada as a first principle, unless there is a documented reason, beyond business case/finance, that precludes the data from remaining here.
- A commitment to public transparency on routing and localization decisions.


a waterfront for everyone
Page 63 of 63

Digital Strategy Advisory Panel Meeting

January 17, 2019
1:08 PM
Meeting Date: 2019-01-17 1:00 PM
Location: 20 Bay street, suite 1310
Link to Outlook Item: *click here*

Notes

Chairs Remarks

- Brief general intro

Management Report

- Walk through of MR deck - developments since Dec 13th DSAP meeting
- No discussion / questions

SWL Solutions Overview (Prem Ramaswani & Craig Nevill-Manning)

- Walk through of SWL deck - technology update
- Intro slides. Taking wastewater tech demo use case as an example, SWL doesn't want to create an "island"; working with City to make sure tech elements can be integrated into City management and monitoring systems; in terms of business case, some scale considerations at play, e.g., with respect to mobility, but building efficiency is one area that could be location specific
  - Comment: where do key decision points come in terms of cost/benefit analysis; want better informed decision-making
  - Comment: innovating in both the physical and digital network; certain elements could work within Quayside network, other elements will need to extend throughout the broader city network; on the latter, who does that? SWL: working on a model for the economics of Quayside (will be in MIDP). Would like to think of Quayside as a proof of concept and good ideas should be adopted, others can be winnowed out
  - Comment: how much effort is being done to look at best practices globally? SWL: Not starting from zero, trying to take what they can from other places and improve upon them
- Ref by panelists to radical technology for mixed use - those especially raise data privacy and ownership considerations - would like to see deeper distinction of this tech as compared to others at some point down the road
- SWL explanation of software defined networks (SDNs).
  - Comment: how are these governed/who owns and controls? Hyper-local networks as compared to companies such as Rogers which have more transparent accountabilities. A: governance/management aspects are no different in terms of regulatory/legislative requirements. Fair amount still be done on intrusion detection, resilience of SDNs
- SWL explanation of Super-Passive Optical Networks (PONs), believes these technologies to be useful and feasible. Still need to figure out the best way to make them happen.

- Comment: should be owned and governed by City, want oversight through democratic process. A: question should be resolved through consultation, expert input, no plans to run system itself, need to work with existing providers.
- Comment: not clear whether City wants to get back into network infrastructure business; need a different forum for examining this question (not for SWL to answer), could be considered through discussions to be held in context of civic digital trust. Comment: what are Alphabet' s ambitions, e.g., Google Fiber has 16 cities using its network infrastructure? From an outside point of view no distinction made between Google and Sidewalk. Need to judge proposals in light of these prospective analyses. A: no discussion/no plans around this.
- Comment: How has SWL accounted for the digitally excluded who typically access these networks through collectives (gets into ownership and affordability, often requires a different structure in terms of how tech is deployed). A: more thinking to be done on this, nothing from a technical point of view would seem to preclude access. Would welcome more information from panelist on how this works elsewhere.

- SWL demo of Koala mount; still looking at business model, just trying right now to prove a need/use case
  - Comment: Who gets to decide what gets attached to Koala mount. A: this is an ideal question for a civic digital trust, and possible enforcement role for the trust
  - Comment: reminder that trust model is not adequate for dealing with all manner of assets. May need to call it something else and be sure that any kind of governance mechanism is capable of addressing thorny issues before adopting technologies/practices could be agreed to. Sees this tied to MIDP. A: SWL has been taking feedback from public roundtables, experts and regulatory bodies and will be coming back to DSAP with a proposal/thinking on this. No presumption that PIPEDA or other legislative standards wouldn't apply

WT Digital Evaluation Criteria for the MIDP

- WT presented the MIDP evaluation framework criteria for the digital and data governance chapters as tabled at the Dec 8th Public Roundtable and noted that it has been working with KPMG on a much more detailed set of criteria
- WT solicited DSAP members to be part of an ad hoc group charged with refining the evaluation criteria for the digital and data governance aspects of the MIDP. Members Alaina Aston, Jutta Trevarinus, Pamela Robinson, Charles Finlay, Teresa Scassa, and Andrew Clement agreed to participate,

[redacted]

Subcommittee Structure Process

- Not discussed

[redacted]

[redacted]



Digital Strategy Advisory Panel - Meeting # 8

THURSDAY, FEBRUARY 14, 2019 FROM 1:00 PM TO 5:00 PM

WATERFRONT TORONTO

20 BAY STREET, SUITE 1310

TORONTO, ON, M5J 2N8

WATERFRONToronto

Meeting Book - Digital Strategy Advisory Panel - Meeting # 8

1:00 - 1:05	1. Opening Session		
	a. Call to Order		M. Geist
	b. Approval of Agenda	Approval	All
	Agenda - Page 4		
	c. Declarations of Conflict of Interest		All
	d. Approval of Previous Minutes i. January 17, 2018	Approval	All
	Draft Minutes - January 17 2019 DSAP Meeting # 7 - Page 6		
1:05 - 1:10	2. Chair's Remarks		M. Geist
1:10 - 1:15	3. Management Report	Information	K. Verner
	Management Report - Page 11		
1:15 - 2:30	4. Sidewalk Labs Integration Deep Dives a. Radical Mixed Use/Flexible Use b. Mobility Platform	Issues Identification & Discussion	C. Nevill-Manning, P. Ramaswani & A. Harvey-Dawson
	SWL Presentation - Page 15		
2:30 - 2:40	Break		
2:40	5. Motion to go into closed session The Panel will discuss the matters outlined in Item 6i, being MIDP Role & Review Process – MIDP Evaluation Framework, in a Closed Session as permitted by By-Law No. 2 of the Corporation. The exception relied for the discussion of Item 6i in Closed Session is Section 6.1.1(l) of By-Law No. 2. The Panel will continue in Open Session at the end of the Closed Session to discuss and vote on any resolutions pertaining to the Closed Session.	Approval	All
	Closed Session Agenda		
2:40 - 2:55	6. MIDP Review Role & Process i. Framework	Information	K. Greene
	Evaluation Framework and Timing - Page 49		
2:55	7. Motion to go into Open Session	Approval	All
2:55 - 3:40	8. MIDP Review Role & Process Continued		
	ii. Methodology	Discussion & Decision	All
	iii. Criteria (Direction to Working Group)	Discussion	All

3:40 - 4:00	9. Working Groups	Information	M. Geist
4:00	10. Motion to go into closed session The Digital Strategy Advisory Panel (the “Panel”) will discuss the matters outlined in items 7 and 8, being Consideration of applicants for the Manager Digital Governance role and Consideration of applications of new Panelists respectively, in a Closed Session as permitted by Section 3.6.2 of the Digital Strategy Advisory Panel Mandate and Operating Protocols. The exception relied for the discussion of items 7 and 8 in Closed Session is Section 6.1.1(b) (Personal matters about an identifiable individual, including employees of the Corporation) of By-Law No. 2 of the Corporation. The Panel will continue in Open Session at the end of the Closed Session to discuss and vote on any resolutions pertaining to the Closed Session.	Approval	All
	Closed Session Agenda		
4:00 - 4:30	11. Consideration of applications of new Panelists	Approval	K. Verner
	Applications - New Panelists - Page 56		
4:30 - 4:50	12. Confidentiality Protocols	Approval	M. Geist
4:50	13. Motion to go into Open Session	Approval	All
4:50 - 4:55	14. Resolutions Arising from the Closed Session (if any)	Approval	All
5:00	15. Adjournment	Approval	All

WATERFRONT TORONTO DIGITAL STRATEGY ADVISORY PANEL
MEETING #8 - AGENDA

February 14, 2019 -1:00pm - 5:00pm
Waterfront Toronto Boardroom
20 Bay Street, Suite 1320 Toronto, Ontario M5J 2N8

1:00 - 1:05	**1. Opening Session**		
	a. Call to Order		M. Geist
	b. Approval of Agenda	Approval	All
	c. Declarations of Conflict of Interest		All
	d. Approval of Previous Minutes	Approval	All
	i. January 17, 2018		
1:05 - 1:10	**2. Chair's Remarks**		M. Geist
1:10 - 1:15	**3. Management Report**	Information	K. Verner
1:15 - 2:30	**4. Sidewalk Labs Integration Deep Dives**		
	a. Radical Mixed Use/Flexible Use	Issues Identification	C. Nevill-Manning P. Ramaswani
	b. Mobility Platform	Discussion	A. Harvey-Dawson
2:30 - 2:40	**Break**		
2:40	**5. Motion to go into closed session**	Approval	All
	The Panel will discuss the matters outlined in Item 6i, being MIDP Role & Review Process – MIDP Evaluation Framework, in a Closed Session as permitted by By-Law No. 2 of the Corporation. The exception relied for the discussion of Item 6i in Closed Session is Section 6.1.1(l) of By-Law No. 2. The Panel will continue in Open Session at the end of the Closed Session to discuss and vote on any resolutions pertaining to the Closed Session.		
2:40 - 2:55	**6. MIDP Review Role & Process**		
	i. Framework	Information	K. Greene
2:55	**7. Motion to go into Open Session**	Approval	All
2:55 - 3:40	**8. MIDP Review Role & Process Continued**		
	ii. Methodology	Discussion & Decision	All
	iii. Criteria (Direction to Working Group)	Discussion	All
3:40 - 4:00	**9. Working Groups**	Information	M. Geist

4:00	**10. Motion to go into closed session**	Approval	All
	The Digital Strategy Advisory Panel (the "Panel") will discuss the matters outlined in items 7 and 8, being Consideration of applicants for the Manager Digital Governance role and Consideration of applications of new Panelists respectively, in a Closed Session as permitted by Section 3.6.2 of the Digital Strategy Advisory Panel Mandate and Operating Protocols. The exception relied for the discussion of items 7 and 8 in Closed Session is Section 6.1.1(b) (Personal matters about an identifiable individual, including employees of the Corporation) of By-Law No. 2 of the Corporation. The Panel will continue in Open Session at the end of the Closed Session to discuss and vote on any resolutions pertaining to the Closed Session. **Closed Session Agenda**		
4:00 - 4:30	**11. Consideration of applications of new Panelists**	Approval	K. Verner
4:30 - 4:50	**12. Confidentiality Protocols**	Approval	M. Geist
4:50	**13. Motion to go into Open Session**	Approval	All
4:50 - 4:55	**14. Resolutions Arising from the Closed Session (if any)**	Approval	All
5:00	**15. Adjournment**	Approval	All

WATERFRONT TORONTO
DIGITAL STRATEGY ADVISORY PANEL
MEETING #7 - MINUTES
January 17, 2019 - 1:00pm – 5:00pm
Video Archive of Meeting: https://bit.ly/2DXFriW

PANELISTS:	Michael Geist	Andrew Clement
	Charles Finley	Teresa Scassa
	Kurtis McBride	Pamela Robinson
	Jutta Treviranus	Dave Dame
	Kevin Tuer	Alaina Aston
	Mark Wilson	

REGRETS: Carlo Ratti

WATERFRONT TORONTO MANAGEMENT & EXTERNAL LEGAL:
Kristina Verner
Chantal Bernier (remote)
George Takach

GUESTS:

Prem Ramaswami	Sidewalk Labs
Craig Nevill-Manning	Sidewalk Labs
Alyssa Harvey-Dawson	Sidewalk Labs

1a. CALL TO ORDER
Being a quorum of Panelists present, the meeting was called to order at 1:04 a.m. Dr. Michael Geist, Chairman of the Panel, presided as Chairman of the meeting.

1b. APPROVAL OF AGENDA
On a motion made by Mark Wilson, seconded by Andrew Clement, it was resolved to approve the agenda for the meeting. Motion Carried.

1c. DECLARATIONS OF CONFLICT OF INTEREST
No new conflicts of interest were registered.

1d. APPROVAL OF PREVIOUS NOTES
On a motion made by Kevin Tuer, seconded by Mark Wilson, it was resolved to approve the notes from the meeting on December 13, 2018 as amended by panelists. Motion Carried.

2. CHAIR'S REMARKS

Dr. Geist provided opening remarks to the panelists, and noted the introduction of Sli.do as a tool to help coordinate questions during the session.

3. MANAGEMENT REPORT

Data trust primer - The draft primer has been completed and has been circulated to attendees from the workshop and members of DSAP for final comments/changes.
Manager, Digital Governance - The position posting has closed and a shortlisted group of applicants will be interviewed in the following week.

Civic Labs - The next Civic Labs will be held February 13, 2019 in partnership with MaRS Solutions Lab focused on the exploration of the notion of a Civic Digital Trust.

Toronto Region Board of Trade Report - The Board of Trade issued a report calling for the Toronto Public Library to oversee smart city digital governance considerations for smart cities in the region. This article has elevated an important conversation and will continue to have conversations with both the Board of Trade and Library, in addition to our government partners, to explore this idea.

4. SIDEWALK LABS SOLUTIONS OVERVIEW

Prem Ramaswami, Craig Nevill-Manning and Alyssa Harvey-Dawson presented various elements of the technology being contemplated by Sidewalk Labs. Additional details are available through the slides provided in the meeting book. They explained that they are still in the early stages of product development and looking to advance these solutions to a minimum viable product that would showcase the technologies and demonstrate their potential to be beneficial at a district scale.

Stormwater Management System - P. Ramaswami described the solution and how it could integrate into the existing city infrastructure. Panelists advised Sidewalk Labs to investigate the stormwater infrastructure project being undertaken in the Don Valley/Coxwell area to assess the potential for coordination.

Digital Infrastructure - Ubiquitous Connectivity - C. Nevill-Manning provided an overview of the proposed network infrastructure that Sidewalk is proposing in the Master Innovation and Development Plan. Technologies include Software Defined Networks and Super PON. They acknowledged the pre-existing relationship that Waterfront Toronto has with Beanfield Metroconnect, and explained that Sidewalk Labs does not intent to build the network or provide the services. They are inviting carriers and competitors as their goal is to take network technologies to the next level, and publish the standards to encourage others to enter the market. Sidewalk Labs clarified that there is no ambition that the network would be delivered as part of Google Fibre or by any other Alphabet company.

Koala - P. Ramaswami and C. Nevill-Manning provided an overview of the Koala mount, which they described as the "USB Port for the Urban Environment." These mounts would be provide a flexible, inexpensive option to quickly replace/exchange fixtures, sensors, in the public realm. The mounts provide power and connectivity wirelessly. A demonstration of the prototype was conducted.

Outstanding Questions

Throughout the presentation, panelists made inquiries regarding the various solutions. A consistent question arose around the business case for each of the solutions, and the impact of scale on the solutions. In addition, panelists expressed a need to understand the data and data models in greater detail. Panelists explained that without knowing what data will be required, it is hard to discuss issues of privacy and data governance, since the treatment of the data would be different depending on the data types, characteristics and ownership.

Panelists also expressed a desire to understand how much time Sidewalk Labs has spent in examining global best practices and lessons learned and to receive copies of any reports that may be available so they understand the baseline that they have heading into the project.

Panelists raised concerns about the governance and legal frameworks that would need to be established, particularly with regard to the network components. In addition, there were questions raised regarding the need to prevent against threats to the infrastructure and ensure proper monitoring is in place. Additional clarification regarding the role of Beanfield in the environment needs to be provided.

Panelists recommend further examination of the solutions, specifically with regard to a cost-benefit analysis and potentially the use of socio-technical impact assessments. Concerns were raised regarding the need to future-proof the solutions and provide for interoperability with legacy systems. In addition, the impact of 5G needs to be factored into the infrastructure plan.

Panelists also discussed the need to ensure that elements other than business structures are examined, including the collective structure where diversity, inclusion and affordability is a central consideration to the model. J. Treviranus will provide sample frameworks and models to K. Verner to distribute to the panel and to Sidewalk Labs. In addition, there was a need to ensure transparency, accountability and public auditability to the systems, particularly to ensure that underrepresented populations are not being marginalized.

Panelists were concerned about the potential repercussions of Koala outside of Quayside and urged Sidewalk Labs to consider licensing terms or another measures to prevent the technology from being used to create surveillance platforms. Panelists requested additional information about the type of devices that could be attached, as well as the role of the data trust to ensure ethical use.

Panelists requested additional information regarding how Sidewalk Labs plans to publish and support the adoption of the standards they are proposing through this project and suggested that Sidewalk Labs investigate credible third parties (e.g. IEEE) that could have a role in the development of these standards.

Panelists raised concerns about the amount of responsibility that was being proposed for the Civic Data Trust/Civic Digital Trust and whether or not the project should/could proceed without the trust being in place. Placing all of the privacy/governance concerns on an entity that does not yet exist is not an appropriate solution. They urged Waterfront Toronto and the Panel to consider the broader governance ecosystem and not consider the trust as the only entity.

Panelists requested that Sidewalk Labs bring forward detailed use cases to demonstrate how the technologies come together to solve challenges at the February meeting. Specific examples requested include the radical mixed use management and mobility platforms.

5. WATERFRONT TORONTO'S DIGITAL GOVERNANCE & PRIVACY EVALUATION OBJECTIVES

K. Verner presented the current digital governance and privacy objectives that will be used to frame the evaluation of the Master Innovation and Development Plan. Waterfront Toronto is working with KPMG to finalize the evaluation criteria. She asked for panelists to create a working group to assist with the development.

Panelists reinforced the need to understand the data ownership being considered through the project, and emphasized that the Panel needs time separate from Sidewalk Labs on these important issues. In addition, they noted that all three levels of government need to be engaged. The panelists also encouraged Waterfront Toronto to share interim work product to be able to provide earlier feedback. Panelists also expressed a need to determine what volume of information from Sidewalk Labs will be required to evaluate the MIDP, whether it will be the full MIDP or a subset of information related to the technology proposals.

The following members of Panel offered to participate in the working group: Alain Aston, Pamela Robinson, Kevin Tuer, Teresa Scassa, Jutta Treviranus, Charles Finley, Mark Wilson and Andrew Clement.

6. SUBCOMMITTEE STRUCTURE PROCESS

In order to ensure that the working groups/subcommittees were able to be actioned, clarity was required regarding the urgency to establish these given the resource constraints, and current demands on panelist time. The Governance and Evaluation Working Groups need to be put into action. C. Finley and M. Geist will work with K. Verner to finalize the Working Group Structure and process prior to the next meeting to ensure that there is clarity as to the best way to operationalize the structure.

7. MOTION TO GO INTO CLOSED SESSION

On a motion made by Pamela Robinson, seconded by Dave Dame, the Panel moved into closed session to consider the applications for the Manager, Digital Governance and new Panel Members. Motion carried.

8. MOTION TO GO INTO OPEN SESSION

On a motion made by Mark Wilson, seconded by Alaina Aston, the Panel moved into open session. Motion carried.

9. RESOLUTION ARISING FROM CLOSED SESSION

None.

10. OTHER BUSINESS

None.

11. OTHER BUSINESS

On a motion made by Charles Finley, seconded by Teresa Scassa, and carried unanimously, it was agreed that there was no further business of the Panel to transact, the meeting was closed at 5:30 a.m.

WATERFRONToronto

FEBRUARY 14, 2019

Management Report

Kristina Verner, Vice President, Innovation, Sustainability & Prosperity

Developments since January 17, 2018

Data Trust Primer - Public Launch – January 18, 2019.

Info Sheets – Social media campaign.

DSAP New Panelist Recruitment - 14 applications received and reviewed. Additional information to be provided in closed session.

Manager, Digital Governance - Interviews have been conducted. Additional information to be provided in closed session.

Civic Labs

- Civic Lab #2: Civic Digital Trusts held February 13, 2019.
- Civic Lab #3: Data Ownership, Monetization & Shared Benefits – Week of March 25

Stakeholder Advisory Committee - Quayside

- The Stakeholder Advisory Committee for the Quayside project on February 26, 2019. The focus will be on the technology proposals from Sidewalk Labs.

Ontario Government Data Consultation

- The provincial government launched the first phase of their public consultation Ontario's Data Strategy on February 5, 2019.

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Thank you.

Waterfront Toronto
20 Bay Street, Suite 1310
Toronto, ON M5J 2N8
www.waterfrontoronto.ca

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SIDEWALK LABS
TECHNOLOGY UPDATE FOR
Waterfront Toronto's
Digital Strategy Advisory Panel
FEBRUARY 14, 2019

DSAP | January 2019

Recap of January 17th Presentation

SIDEWALK LABS

A	**Neighbourhood-Scale Software-Defined Network** • Personal private networks • Higher security • Better management	NETWORKING
B	**Super Passive Optical Network** • Higher-capacity, more efficient fiber use • Easier upgradability	HARDWARE
C	**Koala: Standard Outdoor Mounts with Power & Connectivity** • Reduce time, cost and disruption of deployment • Increase rate of innovation	
D	**Next Time: Open Data in Standard Formats via Standard Interfaces** • Enable innovation • Significantly reduce vendor lock-in	SOFTWARE (for next time)

2

Today's Presentation

SIDEWALK LABS

Discuss two end-to-end data use case examples

1. Real-time measurement to improve mobility
2. Enable a greater mix of uses within buildings

Open Standards

3. Open Data in Standard Formats via Standard Interfaces

Accessibility

4. Digital accessibility principles

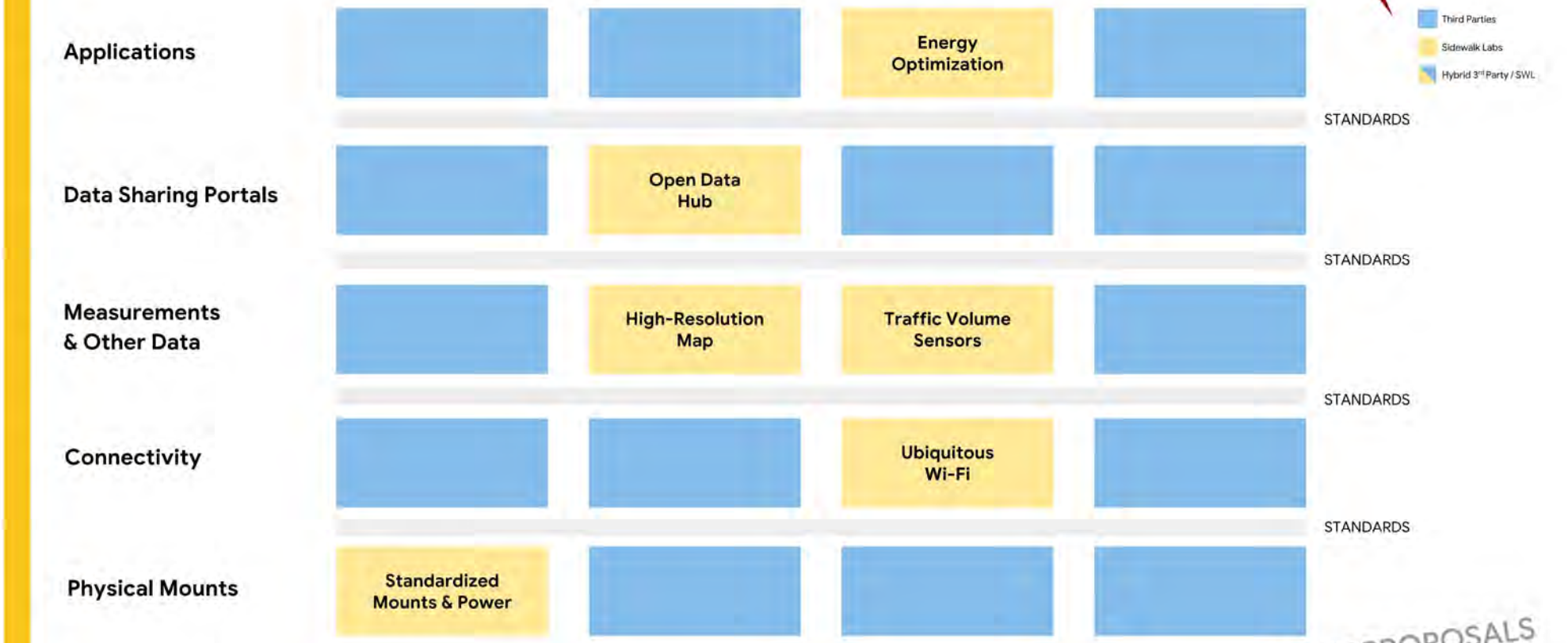
DSAP | Recap: October 16th 2018

Urban Digital Architecture Sketch

Each function within the urban technology stack will be served by Sidewalk Labs and also by others. Interchangeability requires standardized interfaces and formats.

On Oct 16, we presented this slide...

SIDEWALK LABS



DRAFT PROPOSALS

DSAP | January 2019

Urban Digital Architecture Sketch

Each function within the urban technology stack will be served by Sidewalk Labs and also by others. Interchangeability requires standardized interfaces and formats.

Since then, it has become clearer that some components that we thought we might have to build ourselves will likely be able to be provided by third parties.



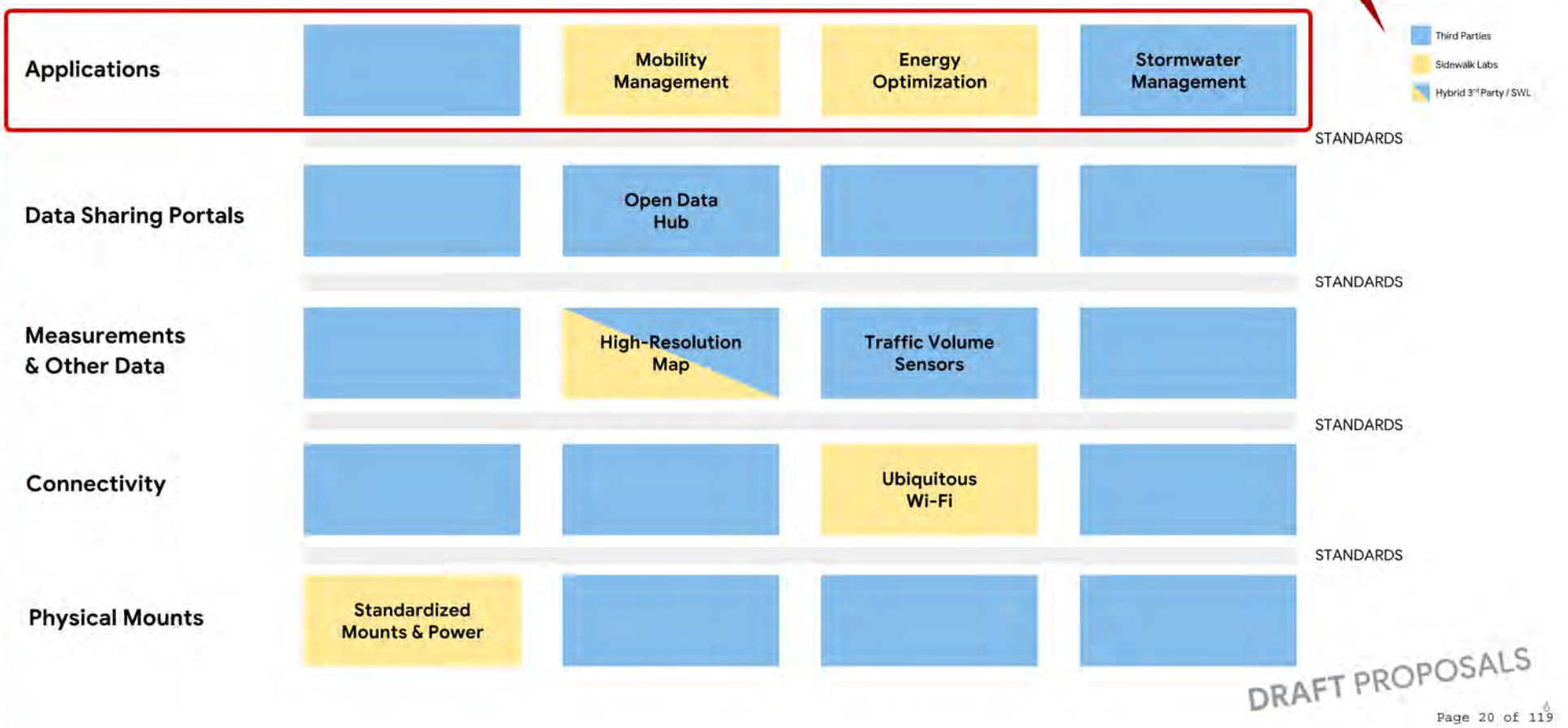
DRAFT PROPOSALS

DSAP | Recap: December 13th 2018

Urban Digital Architecture Sketch

Each function within the urban technology stack will be served by Sidewalk Labs and also by others. Interchangeability requires standardized interfaces and formats.

On December 13th, we presented some specific use cases focused on quality-of-life goals.



DRAFT PROPOSALS

DSAP | January 17th

Urban Digital Architecture Sketch

Each function within the urban technology stack will be served by Sidewalk Labs and also by others. Interchangeability requires standardized interfaces and formats.

On January 17th, we presented specific components of our proposed digital infrastructure.

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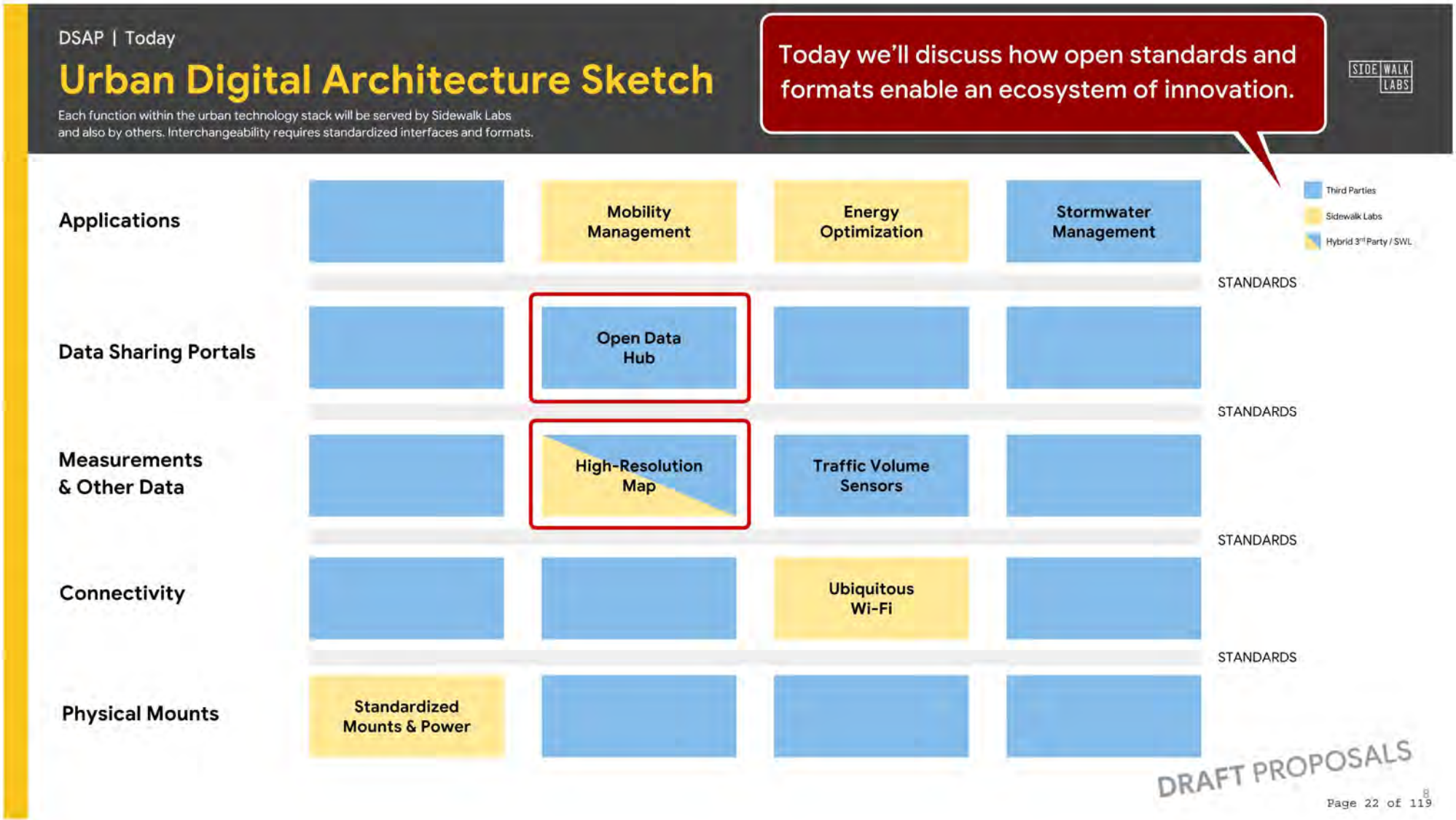
DRAFT PROPOSALS

DSAP | Today

Urban Digital Architecture Sketch

Each function within the urban technology stack will be served by Sidewalk Labs and also by others. Interchangeability requires standardized interfaces and formats.

Today we'll discuss how open standards and formats enable an ecosystem of innovation.



DRAFT PROPOSALS

DSAP

Where We Are Today

SIDEWALK LABS

2018 / 2019 / 2020 / 2021 / 2022 / 2023...	**We are early in our overall product development cycle.** This work reflects the most current perspective from our team. We will continue to refine as we learn from customers and initiate pilots.
Responsible Use of Data	**Throughout our development process, we will be committed to the responsible use of data,** such as privacy by design principles, even as we consult on a broader data governance policy for Quayside, such as our proposal for an independent Civic Data Trust.
We Will Use Published Standards	**The ideas we are describing will use published standards.** We will be engaging partners with whom we hope to develop and deploy these ideas and ecosystems.

DSAP

We are early in the product development cycle

Discovery

Strategy and plan, also known as the "why" and "what"?

Delivery

Working through tradeoffs to deliver the optimal solution, aka "what" and "how"?

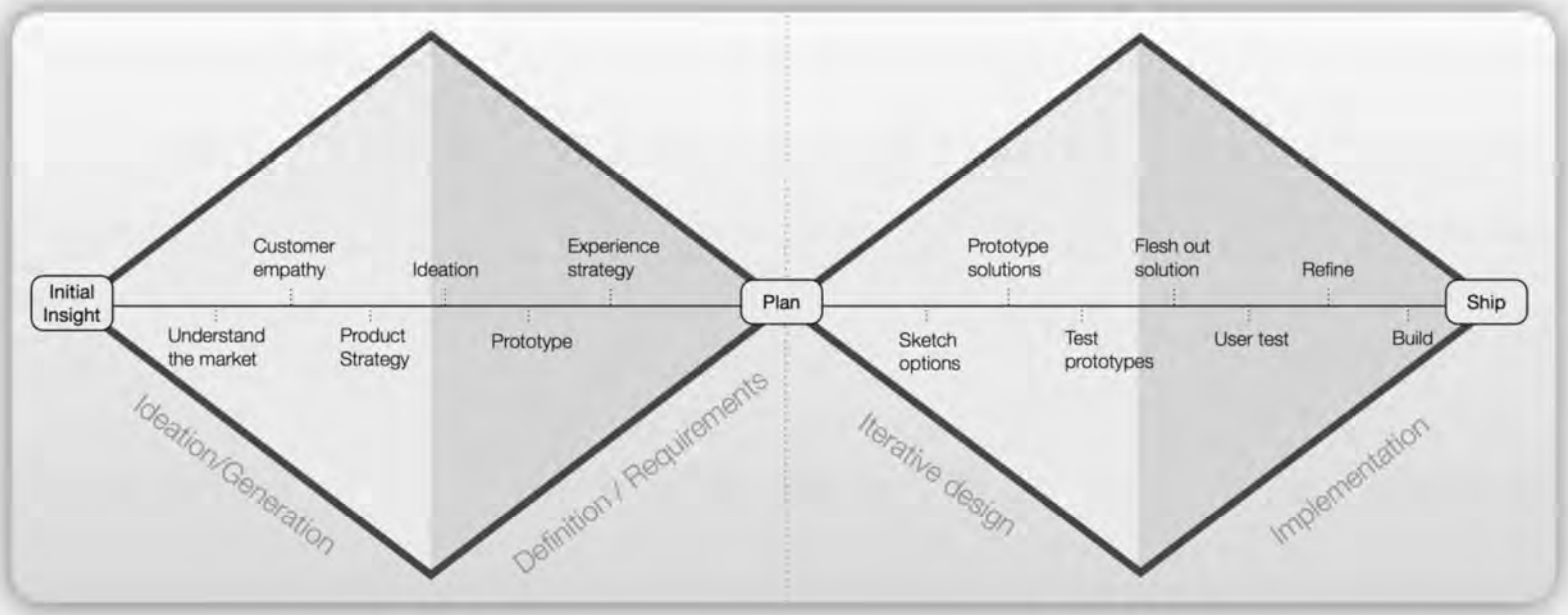


Image credit: Peter Merholz

DSAP

We are early in the product development cycle

SIDEWALK LABS

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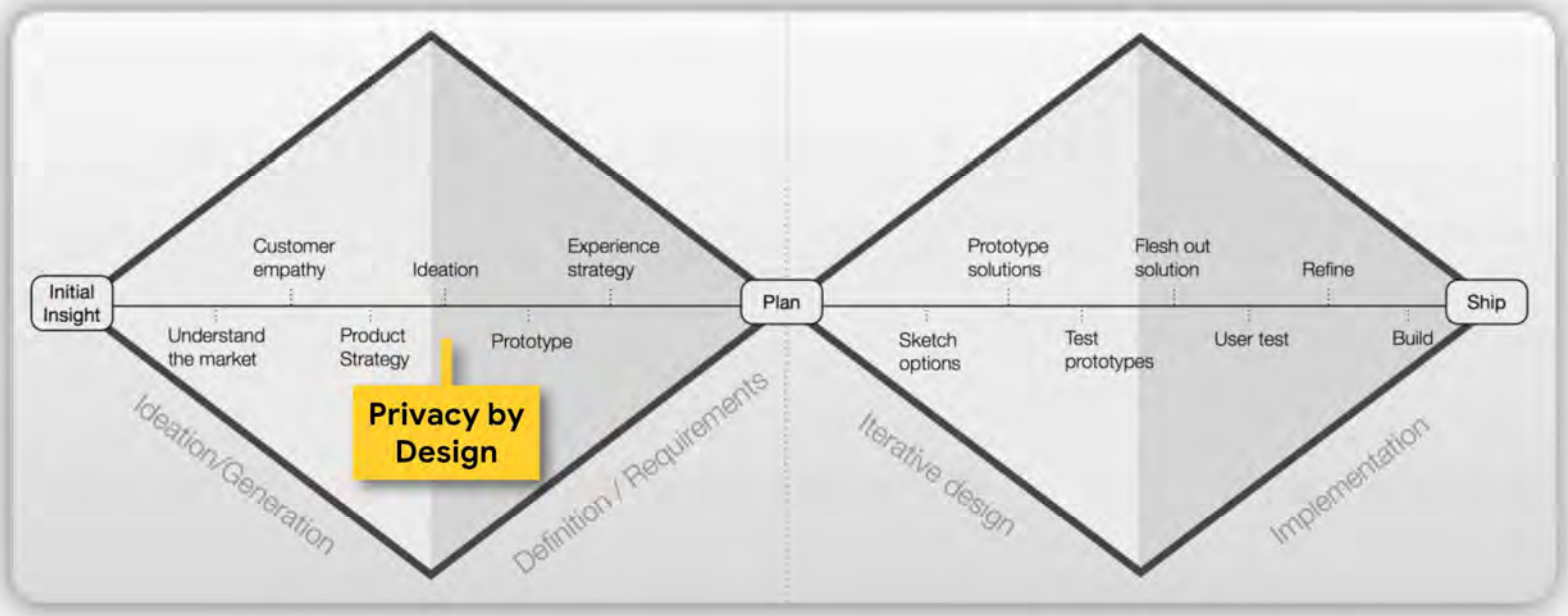


Image credit: Peter Merholz

11

DSAP

We are early in the product development cycle

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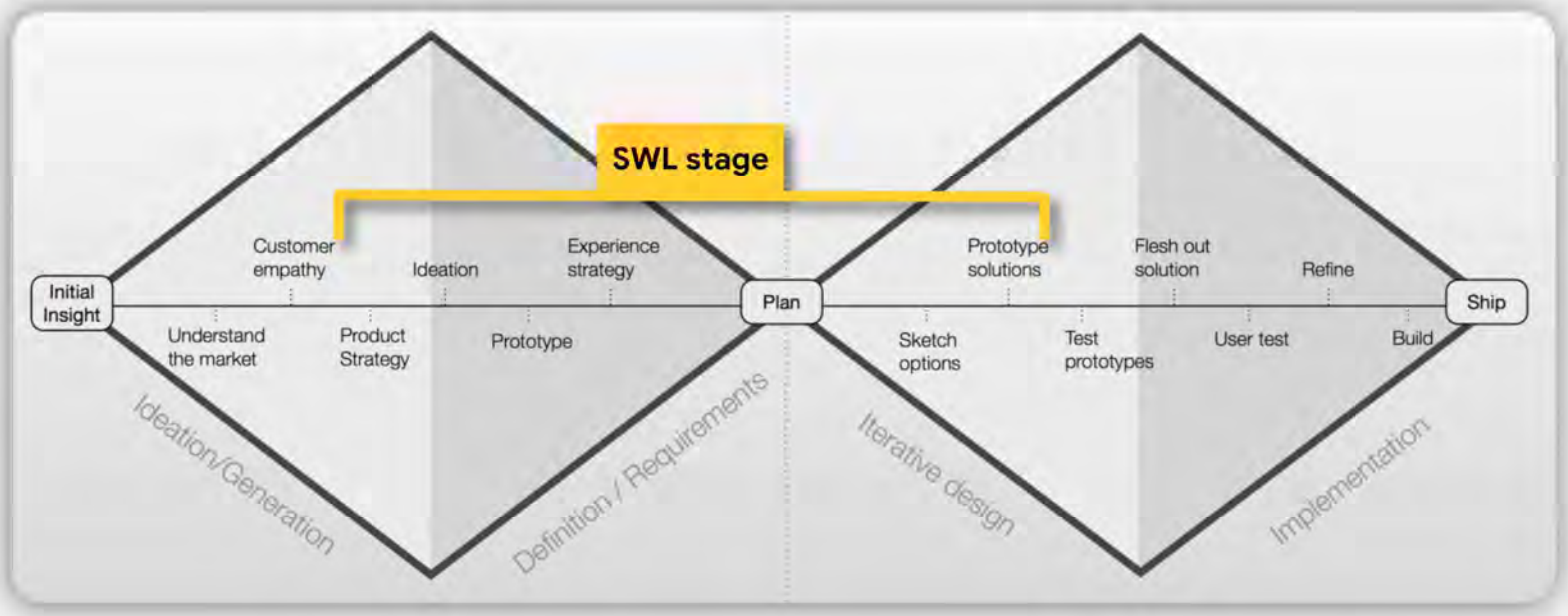


Image credit: Peter Merholz

Today

SIDEWALK LABS

1

Use Case Example One:

Real-time measurement to improve mobility

2

Use Case Example Two:

Enable a greater mix of uses within buildings

3

Open Standards:

Open data in standard formats via standard interfaces

4

Accessibility Principles:

Digital accessibility principles

Improving Mobility - Numina Pilot at 307

SIDEWALK LABS

Why

- We believe that cameras with on-device de-identification can be among the most versatile, privacy-preserving, and cost-effective options for measuring mobility.
- Understanding the flow of pedestrians, bicycles and vehicles, as well as how long people are waiting to cross the road will reduce congestion and waiting time while increasing safety.

What

- As a stand-in for a future street, we are piloting this technology at 307 Lake Shore Blvd East, to understand flows of people throughout the space and aggregate statistics about time spent looking at exhibits, including outdoor weather mitigation structures, flexible pavers and indoor exhibits.
- All sensing is de-identified at source.

How

- Apply Responsible Data Use guidelines
- Test the use of sensors developed by Numina, a civic tech startup using computer vision to quantify movement on streets.
- Numina's software creates "boxes" around each moving object within their sensor's field of view, classifying into broad categories such as pedestrian, cyclist, car without tracking any personal information.

Improving Mobility - Numina Pilot at 307

SIDEWALK LABS

- Numina employs on-device processing to derive de-identified data from images
- The device currently generates paths that moving things took in the scene – pedestrians, cyclists, vehicles – but do not include any information other than the path, category, and timestamp.





In-house SDN rack with b
experimentatio

Improving Mobility - Numina System Diagram

For illustrative purposes

SIDEWALK LABS

On-site Sensor



de-identification

Sensor analyzes images and sends de-identified paths to the cloud

delete images

One randomly sampled image per hour is transmitted, de-identified by blurring, and then stored by Numina for 30 days for quality assurance.

Cloud Servers


```
{
  "time": "2013-01-01T00:03:44.444401152Z",
  "box": "[128, 330, 169, 431]",
  "class": "pedestrian",
  "feedid": "5840a25fffe95e3ff799859e",
  "trackid": "a1ac9ada67a84333b6d31227fac59b9d"
},
{
  "time": "2013-01-01T00:03:44.946940928Z",
  "box": "[139, 307, 176, 398]",
  "class": "pedestrian",
  "feedid": "5840a25fffe95e3ff799859e",
  "trackid": "a1ac9ada67a84333b6d31227fac59b9d"
},
{
  "time": "2013-01-01T00:03:45.446445056Z",
  "box": "[143, 290, 179, 377]",
  "class": "pedestrian",
  "feedid": "5840a25fffe95e3ff799859e",
  "trackid": "a1ac9ada67a84333b6d31227fac59b9d"
},
```


De-identified path data is stored in the cloud indefinitely.



Randomly sampled Image deleted after 30 days

16

RDUA details

Key privacy or data governance consideration

In this pilot, transitory personal information (images) is being captured by a third-party sensor in a privately managed, public space.

De-identification of those images occurs on device.

Risk mitigation

De-identification

In accordance with the RDU Guideline of de-identification by default, the manufacturer of the sensor de-identifies any personal image at the earliest opportunity using the following method: on-device into a sequence of time stamped 2d coordinates linked by an arbitrary path id number and a "class", which specifies if the moving object is a person, bicycle, car, truck, or bus. Sidewalk Labs also never receives any personal information.

Transparency

To satisfy the RDU Guideline of providing transparency on data collection activities, Sidewalk Labs is going to post signs notifying visitors of the data collection activity and the use of the sensors.

Security

Numina's sensors encrypt all communication with TLS1.2 using industry standard AES-256 encryption. Only authorized devices can communicate with sensors, and keys are carefully maintained and rotated frequently. This removes pathways for data interception or sensor access by unauthorized third parties.

Decision

Sidewalk Labs approved this pilot because it meets the beneficial purpose of testing the technology, which is intended to be a tool to improve mobility. Using the RDUA to assess the risks, the manufacturer of the sensors implemented privacy-preserving technology and de-identified the images captured.

Today

1

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Twentieth-Century approaches to zoning

SIDEWALK LABS

For most of the twentieth century, cities separated residential, commercial, and industrial uses geographically to protect homes from noise, air pollution, and other nuisances.

This discouraged an active mix of home, work, and retail into the same neighbourhood — let alone the same building, often creating districts that were deserted at certain times and increasing travel for workers.





PROPOSED DISTRICT MAP

LEGEND AND SUMMARY OF ZONING REGULATIONS

		USE	HEIGHT		FRONT YARD	SIDE YARD	REAR YARD	LOT AREA PER FAMILY
			STORIES	FEET	FEET	FEET	FEET	SQUARE FEET
	A1	AGRICULTURAL — USES PERMITTED IN A1 DISTRICT: GENERAL FARMING, FIELD CROPS, TRUCK GARDENING, CATTLE AND POULTRY RAISING, ETC.	2½	35	50	10	25	5 ACRES
	RA	SUBURBAN — USES PERMITTED IN A1 DISTRICT: ONE FAMILY DWELLINGS, MARKET GARDENING, ETC.	2½	35	25	5	25	½ ACRE
	R1	ONE FAMILY — ONE FAMILY DWELLINGS, SCHOOLS, CHURCHES, LIBRARIES, ETC.	2½	35	25	5	25	4,400
	R2	TWO FAMILY — USES PERMITTED IN A1 DISTRICT: TWO FAMILY DWELLINGS.	2½	35	25	5	25	2,200
	R3	MULTIPLE FAMILY — USES PERMITTED IN R2 DISTRICT: MULTIPLE DWELLINGS, BOARDING AND LODGING HOUSES, HOSPITALS, HOTELS, CLINICS, INSTITUTIONS, PRIVATE CLUBS, FRATERNITY HOUSES, LODGES, ETC.	3	45	25	5 FOR 2 STORIES 6 FOR 3	INTERIOR 25 15 CORNER	800
	R4		6	75	25	5 FOR 2 STORIES PLUS 1 FOOT FOR EACH STORY OVER TWO	INTERIOR 25 15 CORNER	400
	C1	LIMITED COMMERCIAL — USES PERMITTED IN MULTIPLE FAMILY DISTRICT: NEIGHBORHOOD RETAIL STORES ONLY: GROCERY, DRUG STORE, ETC.	2	35	25	NONE UNLESS LOT ADJOINS DWELLING DISTRICT	25	2,200
	C2	COMMERCIAL — USES PERMITTED IN C1 DISTRICT: ALL OTHER RETAIL USES — BANKS, THEATRES, DEPARTMENT STORES, RESTAURANTS, FILLING STATIONS, ETC.	3	45	NONE UNLESS COMMERCIAL DISTRICT ADJOINS DWELLING DISTRICT		INTERIOR 25 15 CORNER	800
	C3		6	75				400
	CM	BUSINESS DISTRICT — USES PERMITTED IN COMMERCIAL DISTRICT AND ON ALL FLOORS ABOVE GROUND FLOOR OF A BUILDING ANY USE PERMITTED IN THE LIGHT INDUSTRIAL DISTRICT	VOLUME EQUALS LOT AREA TIMES 150 FEET		NONE	NONE	NONE	400
	M1	LIGHT INDUSTRIAL — USES PERMITTED IN COMMERCIAL DISTRICT AND ANY USE NOT OFFENSIVE BECAUSE OF EMISSION OF ODOR, DUST, SMOKE, GAS OR NOISE.	3	45	NONE UNLESS INDUSTRIAL DISTRICT ADJOINS DWELLING DISTRICT	NONE UNLESS LOT ADJOINS DWELLING DISTRICT	NONE UNLESS INDUSTRIAL DISTRICT ADJOINS DWELLING DISTRICT	800
	M2		8	100				400
	M3	HEAVY INDUSTRIAL — ANY USE EXCEPT PERMANENT DWELLINGS	8	100				4,000 TEMPORARY USE

OFF-STREET PARKING SPACE REQUIRED EXCEPT IN CENTRAL BUSINESS DISTRICT
OFF-STREET LOADING SPACE ALSO REQUIRED FOR INSTITUTIONAL, COMMERCIAL AND INDUSTRIAL USES

ZONING DISTRICTS WHICH ABUT THE MAP BORDER EXTEND TO THE MUNICIPAL LIMITS

Mixed use

For illustrative purposes

SIDEWALK LABS

Why

- Buildings should be able to accommodate a diverse range of tenants — residential, commercial, retail and light industrial.
- However, it's important to minimize the nuisances that commercial and light industrial tenants might create for their neighbours, including machinery noise, odors and vibration from industrial processes, so there needs to be some way to monitor these nuisances and give feedback.

What

- All commercial and light-industrial tenants adhere to agreed-upon limits on nuisances such as noise and air pollution.
- Sensors monitor common spaces (such as hallways and lobbies) on an ongoing, real-time basis and alert appropriately.
- This system **will not** monitor residential units.

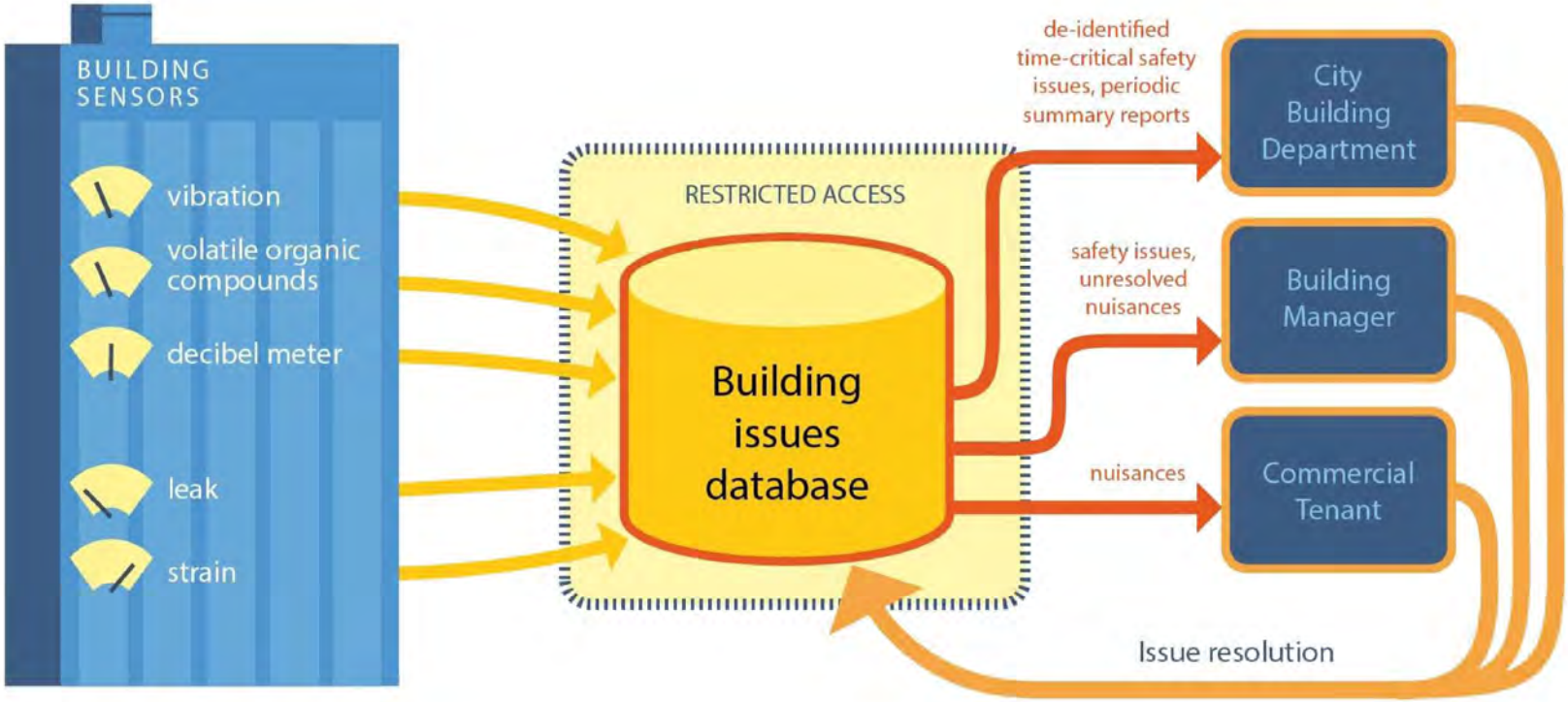
How

- Deploy devices in common spaces that collect non-personal information on vibration, interior air quality, noise levels, energy and water use.
- Access to data will be restricted and monitored
- Any issues are sent to the commercial tenant responsible immediately. If not resolved quickly, they are sent to the building manager for follow-up.
- Issues that create life-safety concerns, such as noxious fumes, would be communicated more quickly and broadly.

Mixed use monitoring

For illustrative purposes

SIDEWALK LABS



RDUA details

For illustrative purposes

SIDEWALK LABS

Key privacy or data governance consideration

In this proposed potential project, to enable a greater mix of commercial and light-industrial spaces, certain environmental information is captured in common spaces by sensors that record and analyse that data. The environmental information collected is Urban Data because it is data collected in a privately owned common space in Quayside.

The data collector must determine whether the data activity involves the collection and use of Personal Information and if so, they must assess compliance with Canadian privacy laws. The data collector must also assess whether they are collecting or using data about people. If so, the data collector completes a RDUA and submits it to the Trust for approval. If the data is not Personal Information and is not data about people, the data collector would submit an application to the Trust that includes the location of the sensors for the sensor registry.

Example RDUA questions:

- What are all of the sources of the data? Describe the technology that will be used to collect/use data.
- Is the data going to be used for advertising purposes?
- What are the benefits to the individual or groups of individuals?
- Does the anticipated use of the data create a risk of harm to the individual or group of individuals (including if there is unauthorized use internally or by third parties)?
- Could the anticipated use of the data result in unforeseen consequences that could reasonably be considered harmful?
- Could the anticipated use of technology harm or benefit certain individuals, groups of people, or communities in unintended or unexpected ways?
- Do the benefits of the data activity outweigh the potential risks?

Today

SIDEWALK LABS

1

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Real-time measurement to improve mobility

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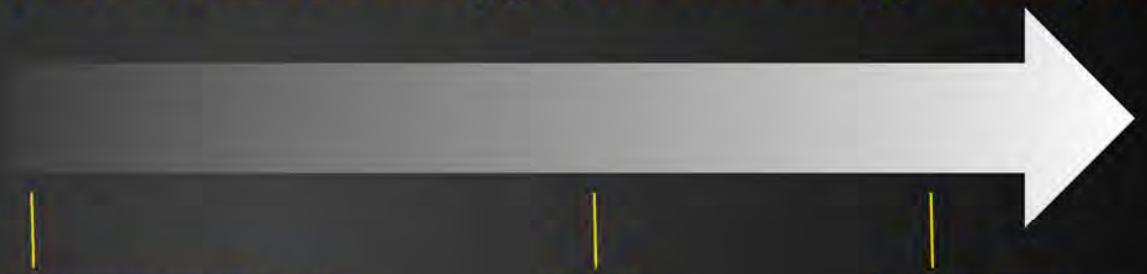
Open Data today

SIDEWALK LABS

Existing solutions

- Toronto's Open Data Portal uses CKAN, an open-source system for open data portals
- ThinkData Work's Namara focuses on normalizing datasets to common formats
- Socrata, OpenGov, Stae, Enigma

There is still a usability gap for technology developers



Early open data (c. 2010)

- Focus on data that is easy to make open, rather than use cases
- Non-standard formats
- Non-standard access methods
- Often not up-to-date
- Not real-time

NOW

What software developers expect

- Application Programming Interfaces (APIs)
- Standardized, well-documented data formats
- Real-time, complete

Open Data in Standard Formats and Standard Interfaces

SIDEWALK LABS

Why

- **Allow for faster innovation.** If software and hardware developers can easily find documentation, example code, they can focus on solving the problems they're interested in.
- **Avoid vendor lock-in.** Standardized interfaces allow one solution to be replaced with a cheaper or better one – like switching web browsers or mail clients.
- **Create an ecosystem.** As APIs and formats are used more broadly, an application developer can build one for many customers – like much of the consumer and business technology industry.

What

- When developing for mobile devices, the web, personal computers and servers, software developers are accustomed to using Application Programming Interfaces (APIs) with example code and good documentation.
- If cities provide the same environment when building applications for cities, the rate of technology innovation will increase substantially.

How

- Support existing standards where they exist
- Develop new formats and APIs with as broad a set of partners as possible.
  - begin by building applications collaboratively
  - where APIs and formats prove valuable, pursue consensus with partners to create new standards

Open Formats

For illustrative purposes

SIDEWALK LABS

Some of the data standards we are using, or are considering using:

Geography

- **GeoJSON** – simple representation for geographic objects
- **CityGML** for representing high-resolution city data
- **OpenStreetMap**, a representation of roads and other public realm infrastructure

Buildings

- **Industry Foundation Classes**, a standard for Building Information Models, along with Linked Data extensions
- **CityGML** and **CityJSON**, standards for describing building shapes and sizes

Mobility

- **SharedStreets** emerging standards for describing traffic and street segments
- **GTFS**: Transit Schedules
- **GBFS**: real-time bike share availability

Sustainability

- **Brick** - a standard for describing building infrastructure, including HVAC systems

Public Realm

- **Public Life Data Protocol**, a standard from the Gehl Institute on use of public space

Cost, Access, Governance

For illustrative purposes

SIDEWALK LABS

Cost

- Free for research and small-scale development use.
- At larger scale, higher-frequency use, or with service level agreements, portals should be able to recover costs.
- A competitive environment should keep costs down.

Governance

- Civic Data Trust should require use of standards.
- International standards organizations, e.g. World Wide Web Consortium, the Institute of Electrical and Electronics Engineers, International Organization for Standardization, Open Geospatial Consortium
- Industry consortia, e.g. Open Cities Network

Access

- Publicly accessible by default
- Option for restricted access, e.g. CDT determines data is sensitive or re-identifiable
- Option for proprietary data, e.g. CDT allows collector to charge for real-time data while publishing delayed or aggregate data.
- Access could be controlled by the CDT using a method similar to Estonia's X-Road

Digital Map Example

For illustrative purposes

SIDEWALK LABS

Why

- Detailed, three-dimensional map for residents and visitors to explore and visualize points of interest, routes, sensor locations, events
- Autonomous vehicles
- Robotic delivery
- Heating and cooling optimization based on when sunlight will shine on buildings
- Recording and planning maintenance tasks (e.g. every park bench with a unique identifier)
- Policy / decision making

What

- Contributions to OpenStreetMaps, and open data portals including more detail, higher accuracy locations and elevation
- Geographic data objects, e.g. building geometry, street furniture, created in the process of designing and building Quayside made publicly available
- New APIs to access detailed maps
- Consistent use of standard formats (e.g. IFC, CityGML, SharedStreets)
- No data silos due to incompatible formats or discoverability – but restricted access for sensitive data.

How

- Building on existing data formats and sources
- Making BIM models for buildings, CAD drawings of urban plans and infrastructure, and location of sensors available in open formats
- Maintaining and updating the map automatically
- Providing high reliability, low latency access to the data

Today

SIDEWALK LABS

1

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Digital accessibility principles

Accessibility

For illustrative purposes

SIDEWALK LABS

1. The accessibility community has driven major contributions to **technological innovation**. We want to create structures that legitimize, give credit to, and pay the people doing this important work.
2. In some places, we're considering integrating **digital tools into city life**. That means those tools need to work for everyone.
3. We are starting from scratch, so we can build an **intentionally flexible** city.
4. Designing from **underrepresented and marginalized experiences** makes the final product better for everyone. This is often known as the curb cut effect.
5. **Co-designing** with people with lived experience of disability and marginalization is the best way to create experiences that work for everyone.

DRAFT
for discussion

Whom do we build with?

For illustrative purposes

SIDEWALK LABS

This is not a comprehensive list; it aims to give a sense of the variety of experiences we're considering — without reducing lived experiences to archetypes. We're focused on co-creating with people, not building for them.

- People who are deaf, hearing impaired, and/or part of the Deaf community
- People with sight impairment, low vision, or blindness
- People with color blindness
- People with cognitive impairment
- People with developmental disabilities
- People using wheelchairs or other mobility aids
- People with walking difficulties
- People with reduced manual dexterity, arm function, or strength
- People with diversities in age (children and older adults)
- People who need to sit down or rest frequently
- People who have survived trauma
- People who experience PTSD
- People who are accompanied by service animals
- People with diversities in stature (includes people who are very tall, short, or obese)
- People who aren't paying attention or are on their phones
- People who are pregnant or nursing
- People who are accompanied by babies and/or young children
- People who are neurodiverse, have ADHD, or are on the autism spectrum
- People experiencing allergies
- People who are exceptionally sensitive to cold or heat
- People who are sensitive to loud or persistent noise
- People who are not experienced with technology
- People who experience chronic and/or acute pain
- People experiencing anxiety, depression, altered perceptions
- Newcomers, non-native English speakers
- Caregivers

DRAFT
for discussion

Digital Accessibility Principles (Draft #1)

For illustrative purposes

SIDEWALK LABS

1. Provide information in multiple, easily accessible formats and languages.
2. Support multiple input modalities to all digital experiences.
3. Preserve privacy and support fairness in machine learning.
4. Allow an easy way to give feedback on digital tools.
5. Use common standards for messages in audio wayfinding features.
6. Provide a recommended, free option that is also open to third-party alternatives wherever technology is necessary to interact with a key service.
7. Use the best digital accessibility standards available and set new, higher standards wherever possible.

DRAFT for discussion

DSAP

A reminder: we are early in the product development cycle

Discovery

Strategy and plan, also known as the "why" and "what"?

Delivery

Working through tradeoffs to deliver the optimal solution, aka "what" and "how"?

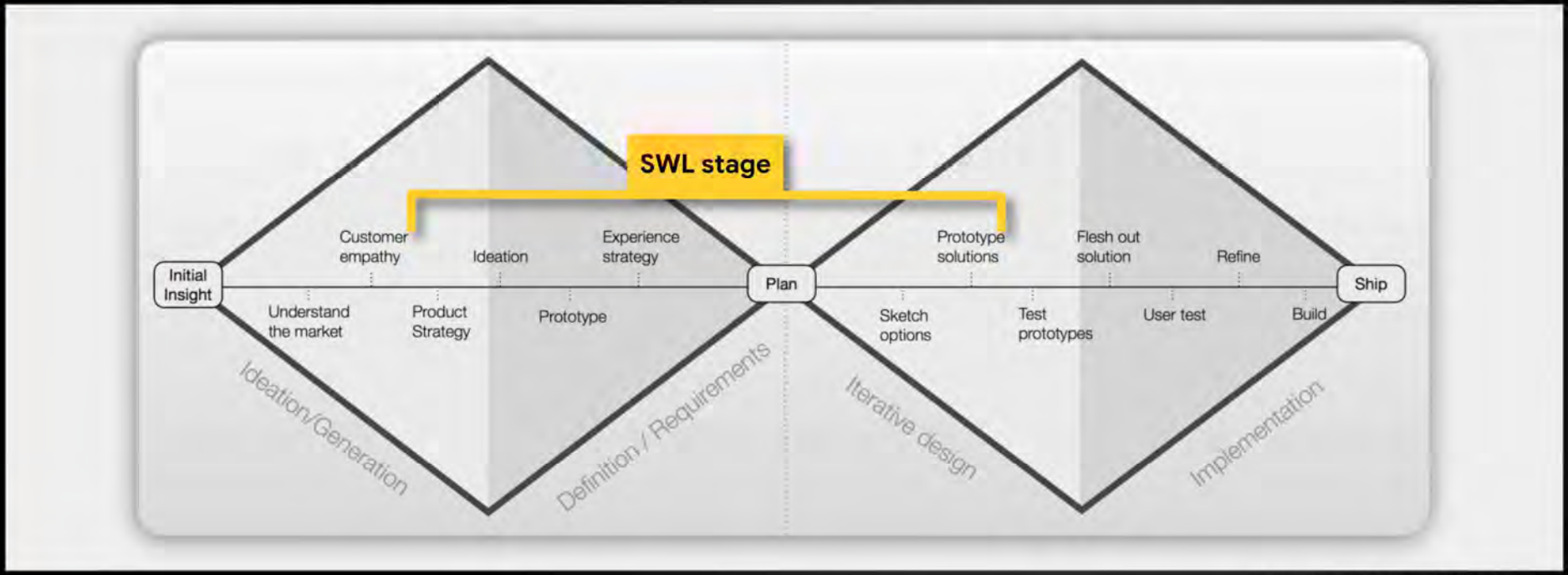


Image credit: Peter Merholz

33

In summary

SIDEWALK LABS

Discuss two end-to-end data use case examples

1. **Real-time measurement to improve mobility**
   – **Numina pilot at 307** - a computer vision sensor that de-identifies on device
2. **Enable a greater mix of uses within buildings**
   – Ensure that commercial and industrial uses don't create nuisances for residents.

Open Standards

3. **Open Data in Standard Formats via Standard Interfaces**
   – Allow for faster innovation, prevent vendor lock-in, and create a vibrant ecosystem

Accessibility

4. **Digital accessibility principles**
   – Our commitments to digital accessibility in the tools we create

Evaluation Framework Update

DSAP
February 14, 2019

Draft and Confidential

Evaluation Framework as applied to the MIDP Outline

SWL is proposing three volumes for the MIDP, each volume will need specific evaluation teams & techniques

VOLUME ONE

Development Plans at three scales

- Testbed Scale
- Proof-point Scale
- Full Scale

Evaluation required:
Review and evaluate development planning, pillar work/innovations (as they relate to planning) and the overall case for scale as it relates to achieving objectives and financial feasibility

VOLUME TWO

Pillar deep dives and innovation ideas

- Mobility
- Public Realm
- Buildings
- Housing
- Sustainability
- Digital Infrastructure

Evaluation required:
Review the innovations presented by each pillar for adherence to goals and objectives and overall viability

VOLUME THREE

Business Terms, Financial Model, Roles & Responsibilities, Policy Impacts, Implementation

Evaluation required:
Review rooted in financial analysis tied back to pillar work, economic growth, viability, policy achievability and implementation roles and responsibilities

Process to Develop the Evaluation Framework

WT management and the consultancy have been drafting the MIDP Evaluation Framework

The Framework is consistent with:

- Waterfront Toronto's Mandate
- The original RFP: *Define measurable outcomes for the Project, including the necessary Key Performance Indicators ("KPI's") and measurement techniques to evaluate success. (p. 14)*
- The PDA: WT's defined role of:
  - Working with Sidewalk Labs to develop the financial model and implementation phasing for the Project that seeks to make the Project financially viable and developing the business case for the MIDP, taking into account land value, Intellectual Property and infrastructure plans and any related standards or requirements (Section 1.03 (a)(vii));
  - Collaborating with Sidewalk Labs with respect to the achievement of the vision and goals of the Parties..., including with respect to sustainability, buildings, community and city services, public realm, mobility and digital platform (Section 1.03 (a)(ix));

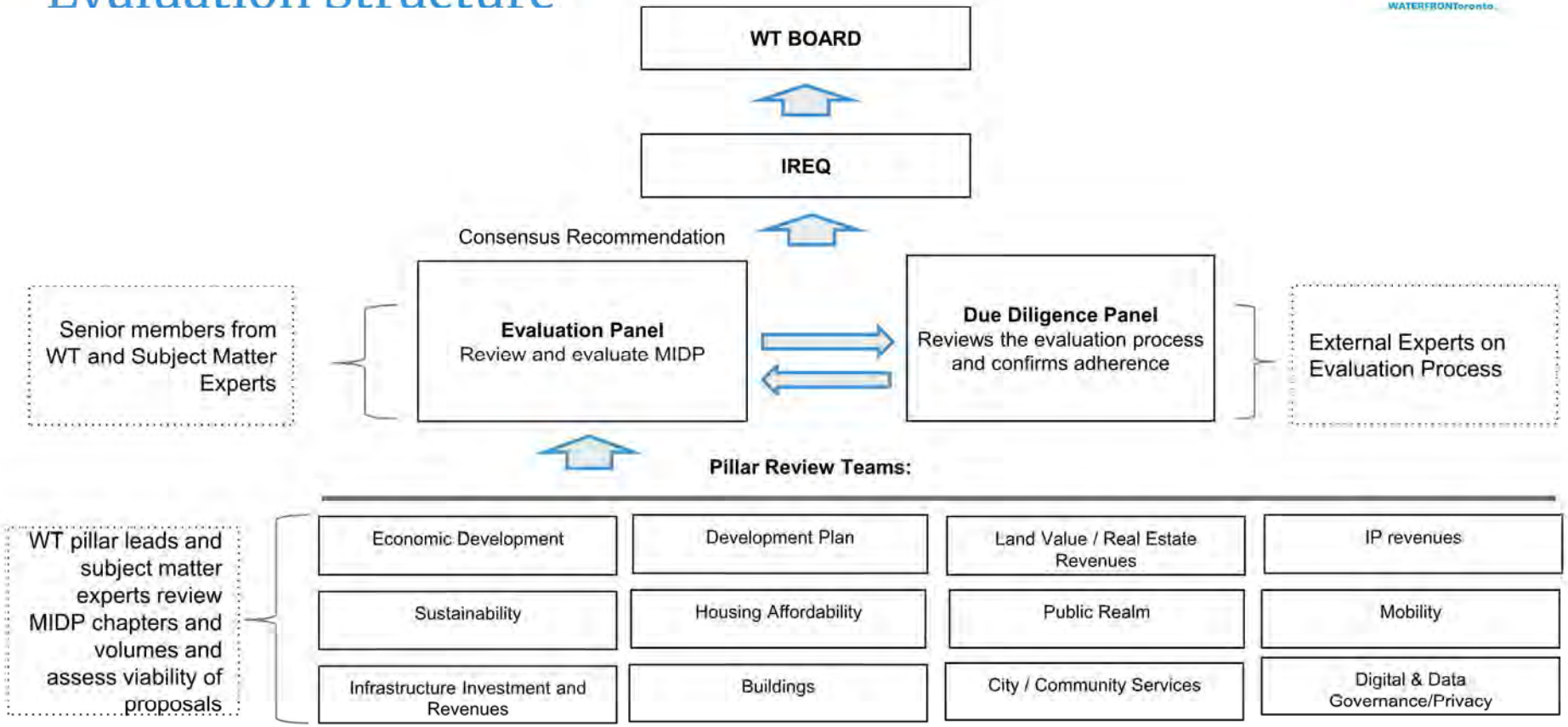
Evaluation Framework: 3 Components

Framework components are applied at the pillar level and overall

FRAMWORK COMPONENT	DESCRIPTION	MIDP VOLUME(S)	TYPE of MEASUREMENT
1. Goals and Objectives	**Quantitative and Qualitative** Must Haves 4 Must Dos 4 Pillar Targets 8	**Vol 1** **Vol 2** **Vol 3**	**Point scoring system**
2. Business Terms/ ProForma	**Quantitative** multi pronged and tied to Goals and Objectives	**Vol 3**	**Development Pro-forma** Pass/Fail
3. Development Plan	**Qualitative** Rooted in public policy and tied to Goals and Objectives	**Vol 1**	**Planning Justification Report** Pass/Fail

OVERALL MIDP EVALUATION

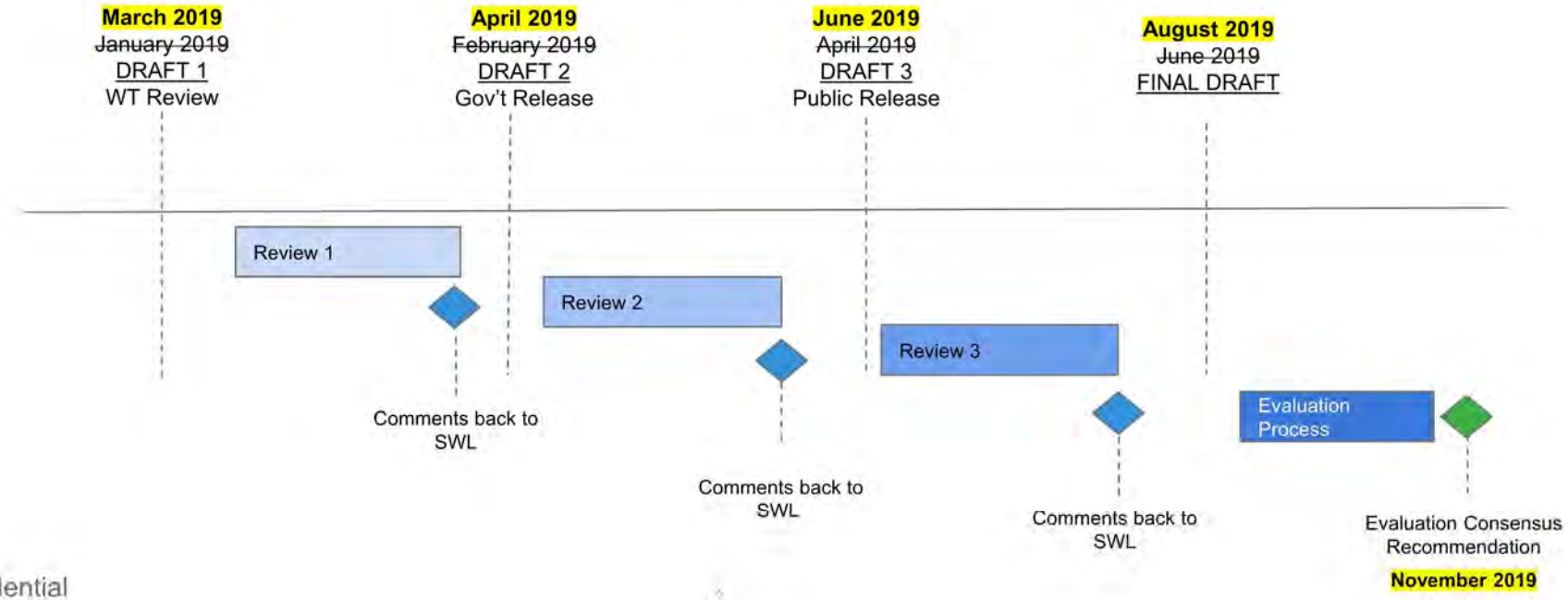
Evaluation Structure



Evaluation Framework Update: Revised Timeline

Sidewalk Labs has reported a delay in the delivery of the full Volume 3 until March 3rd 2019.

- Volume 3 includes Business Terms, Financial Model, Roles & Responsibilities, Policy Impacts, and Implementation.
- Volume 3 is essential to perform a fulsome review of the MIDP.
- The timeline below has been updated to show the review and evaluation process once the full MIDP has been received.



Confidential

WATERFRONToronto

Thank you.

Waterfront Toronto
20 Bay Street, Suite 1310
Toronto, ON M5J 2N8
www.waterfrontoronto.ca

Join Waterfront Toronto on social media

Pages 997 to 1060
are withheld
pursuant to paragraph
19(1)
of the *Access to Information Act*

****

Les pages 997 à 1060
font l'objet d'une exception totale
conformément à la disposition de paragraphe
19(1)
de la loi sur l'accès à l'information

Pichette, Chanelle (INFC)

From: Morin, Kathy (INFC)
Sent: June 15, 2018 2:33 PM
To: Nassif, Marie-Pier (INFC)
Subject: FW: MinDM week of June 18th - Toronto WF and Sidewalk Labs
Attachments: Revised MIN-DM June 18 2018 WTST.docx

Importance: High

From: Tippins, Shawn (INFC)
Sent: June 15, 2018 2:28 PM
To: Morin, Kathy (INFC) <kathy.morin@canada.ca>
Subject: RE: MinDM week of June 18th - Toronto WF and Sidewalk Labs
Importance: High

See attached. Sorry this took so long. Glenn actually want to see it a couple of times. This version has gone to Tammy O'Grady in DMO. DMO is going to ensure that everyone attending the MIN-DM on Monday has a copy.

MIN-DM, June 18, 2018. Item: Waterfront Toronto (WT) / Sidewalk Labs

The Minister will be meeting with WT executive leadership and federally-appointed Board members on June 22. WT will provide updates on the Port Lands and Cherry Street Lakefilling projects. Expected attendees include WT CEO Will Fleissig and staff, and the following Board members:

- Ms. Helen Burstyn, Chair of the Board of Directors, Waterfront Toronto (Ontario)
- Ms. Janet Rieksts-Alderman, Director, Waterfront Toronto
- Ms. Jeanhy Shim, Director, Waterfront Toronto
- Mr. Mazyar Mortazavi, Director, Waterfront Toronto
- Ms. Sevaun Palvetzian, Director, Waterfront Toronto

Toronto Waterfront Revitalization Initiative (TWRI)

- WT is a not-for-profit entity established under provincial legislation to lead and implement the TWRI. The Province, City of Toronto and Federal Government each appoint four of its twelve Board members. The DM of INFC is chairing the Inter-Governmental Steering Committee (IGSC) for the TWRI this year, a senior officials-level information sharing and coordinating body among the three levels of government and WT. It will meet again in September.

Quayside:

- Following a Request for Proposal (RFP) for a development funding partner, WT and Sidewalk Toronto entered into a Framework Agreement in October 2017 consisting of community engagement, joint planning and project testing.
- Under the Framework Agreement, WT and Sidewalk are working on establishing a Partnership Development Agreement (PDA), a public document that will provide a work plan to ultimately complete a Master Innovation and Development Plan (MIDP) by the end of the calendar year. A draft PDA will be available for WT Board review and governments' review in early-mid July.
- At the same time WT and Sidewalk are undertaking a public engagement process involving town-halls and other means to keep the public informed and reflect feedback in the Quayside initiative as it moves forward. WT has also established an arms-length Data Strategy Advisory Panel to provide insight on ethics, accountability, transparency, protection of personal privacy, data governance and cyber security as the Quayside initiative develops.
- Since it is not a funding partner, the federal interest in WT's engagement with Sidewalk Toronto on the Quayside project is to understand how activities will inform Government of Canada policy development on data ownership/control, privacy and ethics. INFC acts as a portal for linking to the broader federal community on policy questions and other issues.

Port Lands Flood Protection / Cherry Street Lakefilling

- The contribution agreement for Port Lands came into effect on May 1 and INFC is establishing an oversight committee with WT to monitor compliance. WT has also taken steps to commence the planning and implementation phase, and is planning to start site mobilization in the first week of July.
- WT has satisfied federal duty to consult requirements to date and is engaged with First Nations communities on a means to formalize their involvement in public realm and other project aspects.
- Funding was also included for the Cherry Street Stormwater and Lakewater project under the Clean Water and Wastewater Fund (CWWF). Cherry Street lakefilling is advancing, with barges currently delivering core stone fill onsite.

Pichette, Chanelle (INFC)

From: Nassif, Marie-Pier (INFC)
Sent: June 15, 2018 2:57 PM
To: Loginova, Natasha (INFC); Landry, Eric (INFC)
Subject: RE: MIn-DM

Here it is. We just received it (10min ago) from Glenn's shop.
CIB was the pen on the note; we fed information on the Port Lands project.



Revised MIN-DM
June 18 2018 WT...

Thanks,
MP

From: Loginova, Natasha (INFC)
Sent: June 15, 2018 2:55 PM
To: Landry, Eric (INFC) <eric.landry@canada.ca>
Cc: Nassif, Marie-Pier (INFC) <marie-pier.nassif@canada.ca>
Subject: MIn-DM

Hello Eric,

Thank you again for the DMAF presentation for Min-DM, which we shared this DMO.

I understand you provided input on Waterfront Toronto/Sidewalks Labs – would it be possible to share the information with me to include in Marc's binder for the Min-DM meeting?

Merci!
Natasha.

MIN-DM, June 18, 2018. Item: Waterfront Toronto (WT) / Sidewalk Labs

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- Funding was also included for the Cherry Street Stormwater and Lakewater project under the Clean Water and Wastewater Fund (CWWF). Cherry Street lakefilling is advancing, with barges currently delivering core stone fill onsite.

Pichette, Chanelle (INFC)

From: Nassif, Marie-Pier (INFC)
Sent: June 18, 2018 5:02 PM
To: Loginova, Natasha (INFC)
Cc: Landry, Eric (INFC)
Subject: FW: For action: TASKING: Minister's trip to Toronto - June 21-22 (due June 18)
Attachments: WT MIN June 22 (004).doc

Natasha,

As discussed, attached is a note CIB (Glenn's group) developed in preparation for this Friday's meeting between Minister Sohi and WT Board members as well as Mr. Fleissig, CEO of WT.

Note that the SN was led by CIB, and my team provided input on the Ports Land Flood Protection project (which I highlighted in yellow). This document complements the information on the Port Lands project that we already included in Annex B of the Minister's package.

Thank you,
Marie-Pier

From: Tippins, Shawn (INFC)
Sent: June 18, 2018 4:24 PM
To: Fraser, Sarah Jane (INFC) <sarahjane.fraser@canada.ca>
Cc: Nassif, Marie-Pier (INFC) <marie-pier.nassif@canada.ca>; Morin, Kathy (INFC) <kathy.morin@canada.ca>; Matharu, Krishen (INFC) <krishen.matharu@canada.ca>
Subject: RE: For action: TASKING: Minister's trip to Toronto - June 21-22 (due June 18)

Sarah – Further to our conversation earlier, attached please find the S.N. for the Minister's meeting with WT. Regards, ST.

From: LeBlanc15, David (INFC)
Sent: June 12, 2018 9:16 AM
To: Thorvaldson, Ashley (INFC) <ashley.thorvaldson@canada.ca>; Tremblay, Jenny (INFC) <jenny.tremblay@canada.ca>; Wronski, Michael (INFC) <michael.wronski@canada.ca>; L'Arrivée, Paul (INFC) <paul.larrivee@canada.ca>; Proulx, Isabelle (INFC) <isabelle.proulx@canada.ca>; Jobin, Anne-Marie (INFC) <anne-marie.jobin@canada.ca>; Tippins, Shawn (INFC) <shawn.tippins@canada.ca>; Wellman, Angela (INFC) <angela.wellman@canada.ca>
Cc: Judge, Robert (INFC) <robert.judge@canada.ca>; Smiley, Helen (INFC) <helen.smiley@canada.ca>; Fraser, Sarah Jane (INFC) <sarahjane.fraser@canada.ca>; Lacasse-Bernard, Natasha (INFC) <natasha.lacasse-bernard@canada.ca>; Doucet, Antoine (INFC) <antoine.doucet@canada.ca>
Subject: For action: TASKING: Minister's trip to Toronto - June 21-22 (due June 18)
Importance: High

Good morning,

The Minister will be travelling to Toronto on June 21-22, 2018. The draft detailed itinerary (DI) is attached for your information. Note that it is subject to change.

Policy is coordinating the briefing package, which will include the following products:

- Remarks for the Community Employment Benefits Event and additional products – Comms and Policy/Sectoral
- Scenario note for meeting with University of Toronto's School of Cities – Policy/Sectoral (please confirm that you are the lead) with input from Smart Cities
- Scenario note for meeting with Waterfront Toronto – Smart Cities (please confirm that Smart Cities is the lead)
- Scenario note for meeting with Mayor of Toronto – Policy with input from POB (might want to include update on DMAF), CIB and Smart Cities

Grateful for your input **before end of day Thursday, June 14, 2018.**

Please note that we will seek more information on the purpose of the meetings as well as what "additional products" are required for the CEB event. We will also draft the scenario notes (UofT and Mayor of Toronto) and share with you as soon as possible.

Please do not hesitate to contact me if you have any questions or concerns.

Thank you for your collaboration.

Best regards,
David

David LeBlanc

Policy Analyst, Policy and Results
Infrastructure Canada / Government of Canada
david.leblanc15@canada.ca / Tel: 613-960-9628

Analyste des politiques, Politiques et résultats
Infrastructure Canada / Gouvernement du Canada
david.leblanc15@canada.ca / Tél: 613-960-9628

From: Popesco, Tatiana (INFC)
Sent: June 11, 2018 5:08 PM
To: Smiley, Helen (INFC) <helen.smiley@canada.ca>
Cc: INFC.O PR.ADMO.Users / Utilisateurs.PR.BSMA O.INFC <infc.pr.admo.users-utilisateurs.pr.bsma.infc@canada.ca>; Keenan, Sean (INFC) <sean.keenan@canada.ca>; Campagna, Annissa (INFC) <annissa.campagna@canada.ca>; Pettipas, José (INFC) <jose.pettipas@canada.ca>; Lacasse-Bernard, Natasha (INFC) <natasha.lacasse-bernard@canada.ca>; Fraser, Sarah Jane (INFC) <sarahjane.fraser@canada.ca>
Subject: FW: TASKING: Minister's trip to Toronto - June 21-22 (due June 18)
Importance: High

Hi Helen,
As mentioned on Friday, please see attached.
Please provide to ADMO by Friday at noon.
Thanks
Tatiana

From: O'Grady, Tammy (INFC)
Sent: June 11, 2018 5:03 PM
To: INFC.O PR.ADMO.Users / Utilisateurs.PR.BSMA O.INFC <infc.pr.admo.users-utilisateurs.pr.bsma.infc@canada.ca>
Cc: INFC.F DM Office / Bureau du SM F.INFC <infc.dmoffice-bureaudusm.infc@canada.ca>; INFC.O CIBTO.ADMO.Users /

Utilisateurs.BTBIC.BSMA O.INFC <infc.cibto.admo.users-utilisateurs.btbic.bsma.infc@canada.ca>; INFC.O PO.ADMO.Users/Utilisateurs.OP.BSMA O.INFC <INFC.PO.ADMO.Users-Utilisateurs.OP.BSMA.INFC@canada.ca>; INFC.F CS ADM Office / Bureau du SMA SM F.INFC <infc.csadmoffice-bureaudusmasm.infc@canada.ca>; Cardinal2, Patrick (INFC) <patrick.cardinal2@canada.ca>; INFC.O Comm DGO Users / Utilisateurs Comm BDG O.INFC <infc.commdgousers-utilisateurscommbdg.infc@canada.ca>
Subject: TASKING: Minister's trip to Toronto - June 21-22 (due June 18)

Good afternoon Policy,

The Minister will be travelling to Toronto on June 21-22, the DI is attached (and may be revised this week). Please prepare scenario notes for each of the Minister's meetings where dept. preparation is noted and provide to our office no later than Monday, June 18 at 4pm.

Thank you,

Tammy O'Grady
Coordination and Special Projects Officer | Agente de coordination et projets spéciaux
Deputy Minister's Office | Bureau du sous-ministre
Infrastructure and Communities | Infrastructure et Collectivités

Infrastructure Canada
427 Laurier Avenue West, 10th Floor, Ottawa, ON K1R 5C7
tammy.ogrady@canada.ca

Telephone | Téléphone 613-941-7502
Facsimile | Télécopieur 613-948-2963
Government of Canada | Gouvernement du Canada



Canada

SCENARIO NOTE TO THE MINISTER

MEETING BETWEEN
MINISTER OF INFRASTRUCTURE AND COMMUNITIES AND
WATERFRONT TORONTO (WT)

MEETING DETAILS

- **DATE/TIME**: Friday, June 22, 2018, 11:30 a.m. to 12:15 p.m.
- **LOCATION**: 150 King Street, Toronto
- **PARTICIPANTS (TBC)**:
  Ms. Helen Burstyn, Chair of the Board of Directors, Waterfront Toronto (Ontario)
  Ms. Janet Rieksts-Alderman, Director, Waterfront Toronto
  Ms. Jeanhy Shim, Director, Waterfront Toronto
  Mr. Mazyar Mortazavi, Director, Waterfront Toronto
  Ms. Sevaun Palvetzian, Director, Waterfront Toronto
  Mr. Will Fleissig, President and CEO, Waterfront Toronto
  Biographies are available in Annex A

ISSUE

The Minister will be meeting with WT executive leadership and federally-appointed Board members. WT will update on the Quayside, Port Lands, and Cherry Street Lakefilling projects.

KEY CONSIDERATIONS

- WT is a not-for-profit entity established under provincial legislation to lead and implement the Toronto Waterfront Revitalization Initiative (TWRI). The three orders of government each appoint four of its twelve Board members. The Deputy Minister of INFC is chairing the Inter-Governmental Steering Committee (IGSC) for the TWRI this year, being a senior officials-led information sharing and coordinating body among the three levels of government and WT. It will meet next in September.

Quayside:

- WT and Sidewalk Labs, a subsidiary of Google parent-company Alphabet, are leading the development of a technology plan to be tested in the 5-acre Quayside district located in the East Bay Front southeast of Downtown Toronto at Parliament Slip, adjacent the Lower Don Lands and Port Lands. The plan would see the creation of a "smart city" that would include mixed residential, commercial, and retail development.

- Following a Request for Proposal (RFP) for a development funding partner, WT entered into a Framework Agreement in October 2017 with Sidewalk Toronto, Limited Partnership – a newly created entity, and affiliate of Sidewalk Labs. The Framework Agreement sets out the basic terms and principles for the Quayside and Eastern waterfront Master Innovation and Development Plan (MIDP).

- Under the Framework Agreement, WT and Sidewalk Toronto are working on establishing a Partnership Development Agreement (PDA), a public document that will provide a work plan to ultimately complete the MIDP by the end of the calendar year. A draft PDA will be available for WT Board review and review by the three levels of government in early-mid July.

- At the same time WT and Sidewalk are undertaking a public engagement process involving town halls and other means to keep the public informed and reflect feedback in the Quayside initiative as it moves forward. WT has also established an arms-length Data Strategy Advisory Panel to provide insight on ethics, accountability, transparency, protection of personal privacy, data governance and cyber security as the Quayside initiative develops.

- Since the federal government is not a funding partner in the Quayside project, its interest in WT's engagement with Sidewalk Toronto is to understand how activities will inform Government of Canada policy development on data ownership/control, privacy and ethics. INFC acts as a portal for linking to the broader federal community on policy questions and other issues.

Port Lands Flood Protection / Cherry Street Lakefilling (PLFP Project)

- In June 2017, the federal government announced a funding contribution of $416 million towards flood protecting Toronto's Port Lands, which includes $32.5 million for the Cherry Street Stormwater and Lakewater project which was funded separately under the Clean Water and Wastewater Fund (CWWF).

- The PLFP Project Contribution Agreement (PLFP CA) came into effect on May 1, 2018. INFC is establishing an oversight committee with WT that will serve to monitor WT's compliance to the PLFP CA.

- WT has satisfied federal duty to consult requirements to date and is engaged with First Nations communities on a means to formalize their involvement in public realm and other project aspects.

- Cherry Street lakefilling is advancing, with barges currently delivering core stone fill onsite.

- Work on the PLFP Project is progressing nicely and WT is planning to start site mobilization the first week of July.

KEY BACKGROUND

PLFP Project

- The next phase of waterfront revitalization includes flood protecting the Port Lands. The PLFP Project is expected to provide critical flood protection through the creation of a naturalized mouth for the Don River. The project scope includes brownfield remediation, the creation of public parks, green space, and upgrades to existing municipal infrastructure including roads, bridges, and water and wastewater systems. It is expected to establish new aquatic habitats and wetlands that support native species. The governments of Canada, Ontario and Toronto are contributing funding equally in a total amount of $1.25 billion for the flood protecting of the Portlands.

Quayside

- On October 16, 2017, the WT Board of Directors endorsed the selection of Sidewalk Labs as the preferred proponent to move forward as the Innovation and Funding Partner for the Quayside Project. This resulted in a Framework Agreement with Sidewalk Toronto, Limited Partnership – a newly created entity, and affiliate of Sidewalk Labs. The Framework Agreement sets out the basic terms and principles for the Quayside and Eastern waterfront MIDP.

- The endorsement would initiate a year-long multistage negotiation to develop a business plan for an innovative and sustainable smart city project. The Quayside project is viewed as a long-term project that would likely extend beyond WT's 25-year mandate which expires in 2028. [redacted]

- The Quayside project will create a new community that will serve as the pilot project to test the vision and desired outcomes for the eastern waterfront. This would encompass a mixed-use of 'smart' community concepts, innovative building techniques and connectivity to build a climate positive city.

- WT has recently formed an arms-length Digital Strategy Advisory Panel to provide guidance on how best to incorporate data privacy, digital systems, and the safe and ethical use of new technologies in the next phase of waterfront revitalization. INFC has been monitoring data and privacy issues related to Waterfront Toronto and the Quayside project– mindful of the national conversations on these issues and possible higher level approaches being considered by the Government of Canada.

POINTS TO REGISTER

- Cities and urban data have become a focal point for the broader discussion on data, including with respect to Quayside and Sidewalk Labs. Mindful of national conversations taking place on this issue, INFC is interested in closely monitoring the data discussion on Quayside.

- I am happy to learn how the PLFP Project is progressing. This initiative will help flood protect portions of Toronto's downtown waterfront and support the transformation of the Port Lands into a vibrant and resilient downtown neighborhood.

Annex A – Biographies of WT Board members and WT CEO Will Fleissig

ANNEX A

Helen Burstyn
Chair of the Board of Directors, Waterfront Toronto



Appointed by the Province of Ontario in February 2016 and assumed the role of Chair in January 2017.

Helen Burstyn has enjoyed a 35-year career in government, business, academia, broadcasting and community service.

She is currently the Distinguished Visiting Professor in the Social Venture Zone at Ryerson University and the co-host of Toronto Files on RogersTV, a weekly community affairs program focusing on the people and issues that matter to Toronto.

The former Chair of the Ontario Trillium Foundation, Helen also served for several years as the Government of Ontario's Special Advisor, Social Enterprise and Chair of the Partnership Forum, the province's advisory body on the not-for-profit and voluntary sectors.

Helen is a director of many non-profit and charitable organizations. She currently serves as Chair of Evergreen and The Walrus Foundation. She is a board member of the Canadian Opera Company, Harmony Hall Centre for Seniors, The Learning Partnership, Luminato, Prime Ministers Row (Ottawa), Soundstreams, the Toronto International Film Festival (TIFF), and the Toronto Public Library Foundation. She is also on the advisory boards of LIFT Philanthropy Partners, the Koffler Centre for the Arts and The Pecaut Centre for Social Impact (LEAP), an organization she co-founded. She served for nine years as a Trustee of CAMH and is a past-president of the Canadian Club of Toronto, co-founder of Gilda's Club Greater Toronto and a founding member of Equal Voice.

Janet Rieksts-Alderman
Director, Waterfront Toronto



Jeanhy Shim
Director, Waterfront Toronto



Appointed by the government of Canada in June 2017.

Jeanhy has been working in the real estate development industry for the past 25 years, providing strategic market analysis, advice and innovative solutions to leading developers, financial institutions, brokers and consultants in the Toronto GTA. Her experience spans the full spectrum of real estate development, including land acquisition, market research and analysis, product development, sales and marketing strategy, sales team management, customer service and post-construction service.

As a Vice President or Consultant, Jeanhy has been involved in over 100 residential projects across the Toronto GTA, as well as projects in other areas of Ontario, Canada and USA. In 2013, she also founded Housing Lab Toronto – an independent housing research think-tank dedicated to re-thinking how we grow our cities; and in 2015, she launched the Children's Discovery Centre pilot project - Toronto's first and only children's museum. The goal of the pilot was to demonstrate a growing need for family-friendly amenities as key part of our growing city, and based on its success, work is now underway to open a permanent, world-class children's museum in Toronto.

Jeanhy has a Master's degree from the London School of Economics and Political Science, and a B.A. from McGill University.

Mazyar Mortazavi
Director, Waterfront Toronto



Appointed by the government of Canada in January 2017.

Mazyar Mortazavi, President and CEO of TAS, is a prominent Toronto city builder with a passion for community-based initiatives. As an entrepreneur for the public good, Mazyar operates on the philosophy that connected communities lead to more beautiful, resilient cities. With this passion for cities, he spearheads projects and initiatives that celebrate culture and art, prioritize sustainability, and foster positive neighbourhood relationships.

After receiving his undergraduate degree in Environmental Studies and Masters in Architecture from the University of Waterloo, Mazyar joined TAS, the family business. Over the past 16 years, he has applied a strong environmental and progressive approach to business earning TAS a B Corp certification and numerous project awards. Under Mazyar's direction, TAS is on the leading edge of change, developing beautifully designed residential and commercial buildings in multiple urban neighbourhoods.

Sevaun Palvetzian
Director, Waterfront Toronto



Appointed by the government of Canada in December 2016.

Sevaun Palvetzian has been CEO at CivicAction since January of 2014. Before CivicAction, Sevaun held several senior executive roles within the Ontario Government including leading the Ontario Place Revitalization project and launching the Youth and New Professional Secretariat – a government-wide strategy to attract and retain future generations of leaders which included launching the award-winning Learn and Work Program for at-risk youth.

Prior to her work in government, Sevaun held positions at the University of Toronto, the World Bank Group, and Presidential Classroom, a Washington D.C. -based civic education organization. Sevaun frequently contributes to city-building efforts including serving as a member of the Premier's Community Hubs Advisory Group, the City of Toronto's Poverty Reduction Strategy Advisory Committee, The Toronto Police Service Board Transformational Task Force, and as a member of Mayor John Tory's Advisory Panel for International Hosting Opportunities. She also sits on the Board of Directors for both Toronto Region Immigrant Employment Council (TRIEC), NPower Canada, and is a member of Ivey Business School Leadership Council.

She completed the Ivey Executive Program at the Ivey School of Business and has an M.A. in history from the University of Western Ontario.

Will Fleissig
President and CEO, Waterfront Toronto



Before joining Waterfront Toronto in January 2016, Will was the President of Communitas Development, a real estate development and advisory company in San Francisco that leads and advises on community-oriented urban developments. He has overseen multiple award-winning, mixed-use, large-scale urban projects.

Will has served in the public sector as the Director of Planning and Development for the City of Boulder, Colorado, and as the Director of Downtown Planning and Development in Denver, where he led the city's efforts to revitalize several historical areas of the city.

Previously, Will directed the planning of many prominent transit-oriented development projects including Boston's North Station Development Plan, Kendall Square/Cambridge Center Master Development Plan and Denver's Union Station Master Development Plan.

Will is well-known nationally as a development and thought leader, building new and existing communities into sustainable, accessible, vibrant and beautiful places. His experience in community engagement, district-scale sustainability, building equitable and inclusive communities, and transit-oriented development serves as an ideal match for Waterfront Toronto's overall approach and vision for community- and city-building.

Will holds a Bachelor of Arts from the University of Pennsylvania; a Bachelor of Architecture in urban design from the City College of New York, and a Master in Public Administration with an emphasis on public finance from Harvard's John F. Kennedy School of Government. He is a licensed architect in the State of California.

Pichette, Chanelle (INFC)

From: Nassif, Marie-Pier (INFC)
Sent: July 11, 2018 1:04 PM
To: Brisebois, Véronique (INFC)
Cc: Landry, Eric (INFC); Sierra, Monica Alejandra (INFC); Loginova, Natasha (INFC); Pichette, Chanelle (INFC)
Subject: RE: Prep - Intro Call with DM Thompson

Véronique,

Tel que discuté hier après-midi, je te transmets le matériel que IPI a préparé pour la rencontre du 12 juillet (demain) entre DM Gillis et DM Scott Thompson, de la province de l'Ontario.



Afternoon revised July 10 WFT ...

Lien: G:\OFFICE OF INFRASTRUCTURE OF CANADA\WATERFRONT TO\Memos\Update for DM Jul 6 2018

Merci et n'hésite pas à me contacter si toi ou Marc avez des questions.

Marie-Pier

-----Original Appointment-----
From: Gillis, Kelly (INFC)
Sent: July 11, 2018 12:25 PM
To: Gillis, Kelly (INFC); Nassif, Marie-Pier (INFC); Fortin3, Marc (INFC); Landry, Eric (INFC); Campbell, Glenn (INFC)
Cc: Langevin2, Carole (INFC); Loginova, Natasha (INFC); Eyre, Jennifer (INFC); Geerts, Line (INFC); Wellman, Angela (INFC); Ladouceur3, Natalie (INFC)
Subject: FW: Prep - Intro Call with DM Thompson
When: July 12, 2018 1:50 PM-2:15 PM (UTC-05:00) Eastern Time (US & Canada).
Where: DM's Office

-----Original Appointment-----
From: Gillis, Kelly (INFC)
Sent: July 11, 2018 11:01 AM
To: Gillis, Kelly (INFC); Fortin3, Marc (INFC); Landry, Eric (INFC); Campbell, Glenn (INFC)
Cc: Langevin2, Carole (INFC); Loginova, Natasha (INFC); Eyre, Jennifer (INFC); Geerts, Line (INFC); Wellman, Angela (INFC); Ladouceur3, Natalie (INFC)
Subject: Prep - Intro Call with DM Thompson
When: July 12, 2018 1:50 PM-2:15 PM (UTC-05:00) Eastern Time (US & Canada).
Where: DM's Office

ATIA - 21(1)(a)
ATIA - 21(1)(b)

Infrastructure Canada

SECRET

pBRIEFING NOTE TO THE DEPUTY MINISTER

Waterfront Toronto Update

(For Information)

ISSUE

- You will have a call on July 12 with Scott Thompson, the new Deputy Minister of the Ontario Ministry of Transportation and Ministry of Infrastructure. The call provides an opportunity to outline the federal stance on the Waterfront file and discuss the agenda for the upcoming Inter-Governmental Steering Committee (IGSC) meeting in Toronto on July 20.

- Issues that may be raised on the call include next steps for the CEO of Waterfront, progress on the Quayside and Port Lands projects; and the go forward approach to governance of the Waterfront file between the three levels of government.

HIGHLIGHTS/KEY CONSIDERATIONS

- This call will take place on the backdrop of Will Fleissig's resignation on July 4. Waterfront's Board has put an interim leadership team in place under acting CEO Michael Nobrega as it launches the search for a new CEO.

- As Waterfront's Board deals with next steps on CEO succession-planning, it will be important for the organization to keep momentum as it progresses on Quayside, and implements the Port Lands Flood Protection project.

- On Quayside, Waterfront announced on June 26 that timelines for completing the Master Innovation and Development Agreement would be pushed back to spring 2019.

- You will want to suggest that a pre-meeting take place ahead of the July 20 IGSC, without Waterfront Toronto, between yourself, Mr. Thompson, and interim City Manager Giuliana Carbone to set the stage for items that will be considered. You will also want to emphasize the need for such pre- or in camera meetings whenever the IGSC is convened.

- The PDA is the key item intended for discussion on July 20. A draft has been provided and governments will be briefed on July 13. Our interest is to ensure it aligns with Waterfront's founding legislation and any relevant agreements Waterfront has with the federal government, such as for Port Lands. The PDA also references the key role of the IGSC on government relations for Quayside.

- [redacted]

- The IGSC and its associated bodies is key to coordinating the role of governments on the Waterfront file. July 20 should also be used as an opportunity to review this structure and solidify any needed adjustments – impressing the need to get this right.

KEY BACKGROUND

Next steps for the CEO of Waterfront

- On July 4 the Waterfront Toronto Board of Directors announced the resignation of CEO Will Fleissig. Ontario-appointed Board member Michael Nobrega will step down from Board duties to act as CEO while the Board undertakes the search for a permanent replacement. Communications materials on Mr. Fleissig's resignation are included under **Annex A.**

Quayside Update

- On June 26 Waterfront and Sidewalk Toronto issued a joint newsletter pushing back timelines for finalizing the Master Innovation and Development Plan (MIDP) to spring 2019. A copy of the newsletter is included in **Annex B.**

- Waterfront and Sidewalk Toronto continue to work towards completing the PDA. A draft has been circulated to governments, and Waterfront will brief INFC on July 13. The Waterfront Board will meet on July 31 to consider and approve the PDA, which is destined to be a public document. A summary of key elements of the draft PDA is included under **Annex C.**

July 16th MoU workshop

- IPI and POB staff will meet with City of Toronto and Ontario personnel on July 16 to workshop issues around Waterfront governance. [redacted] The proposed agenda for the meeting is included under **Annex D**. To prepare for the meeting, IPI has drafted a one-pager outlining key elements in Waterfront's structure, included under **Annex E**.

[redacted]

[redacted] an important aspect to resolve is how Waterfront Toronto's involvement in Quayside-focused IGSC meetings is to be managed. Waterfront originally acted as the secretariat for the QESC – as most supporting documents come from them. It will be important to maintain a communication channel where Quayside matters can be discussed strictly between the three levels of government.

Port Lands Flood Remediation

- The Contribution Agreement (CA) for the Port Lands flood protection project came into effect on May 1, 2018. INFC is establishing a bilateral oversight committee with Waterfront that will serve to monitor Waterfront's compliance with the CA.

- Waterfront has satisfied federal duty to consult requirements to date and is engaged with First Nations communities on a means to formalize their involvement in public realm and other project aspects.

- Work on the PLFP Project is progressing on schedule and Waterfront has commenced site mobilization.

- Cherry Street lake filling is advancing, with barges currently delivering core stone fill onsite.

[redacted]

A "Data Trust" refers to a mutual organisation formed to manage data on its members' behalf. Participants would pool their data forming a trust, stipulating conditions under which data could be shared. The trust would retain a duty of care without conflicting goals such as making a profit or furthering a research career. Waterfront and Sidewalk are considering whether such an approach may be appropriate in the context of Quayside.

NEXT STEPS

- Your call with Mr. Thompson will scope these issues in advance of the July 20 IGSC. Key points to register are attached. We will work with contacts in Ontario, the City and Waterfront to finalize the agenda for the July 20 meeting and provide key materials for consideration at the discussion.

POINTS TO REGISTER – WATERFRONT TORONTO ISSUES

Overall message and federal role

- I look forward to working with you as INFC takes on the IGSC Chair for this fiscal year. Two big projects we have before us are the Port Lands Flood Protection, and Waterfront's partnership with Sidewalk Labs on Quayside.

- We welcome being a funding partner on Portlands, and that implies a defined federal role with limitations.

- The federal government is not an ongoing funding partner on Waterfront Toronto itself, and deals with the revitalization initiative project by project, as it has done historically.

- The Quayside project is of interest to federal government in terms of what it means for Canada – the opportunity to pilot innovation, and collaborate in a unique entity with 3 orders of government

- Importantly, we need to ensure a strong bond between Waterfront's board and management, and governments need to respect and support good governance.

- Similarly, Waterfront needs to be supported in dealing with its funding and planning partners, as some of these may pressure good governance and try to deal with governments directly.

- INFC is prepared to help and support other governments and navigate the policy issues coming up of national significance, while being mindful of the need to think in terms of national frameworks at the federal level.

The July 20th IGSC meeting

- The Partnership Development Agreement (PDA) is coming up for our consideration on July 20. The PDA's expected release in the coming weeks will signal the start of an intense period for Waterfront, as it turns completing the Master Innovation and development Plan.

- [redacted]

- We also want to make sure we have the right coordinating structures in place to ensure issues are dealt with by the right groups and Waterfront's Board and Management receives appropriate feedback. The IGSC plays a key role here. We should review its structure and solidify any adjustments where needed.

- Along with the City, we will need to touch base just between governments ahead of July 20 to make sure we are comfortable with the agenda and to set the stage for the discussion.

- I would welcome your views, and hope we can discuss further when we meet in Toronto on July 20

Quayside-specific points

- I noted the announcement of the revised timeline for completing the Mater Innovation and Development Plan (MIDP) which is now targeting spring 2019.

- Waterfront has now circulated the draft PDA and is briefing governments in the lead-up to July 20. Our interest from the federal perspective is to ensure it aligns with Waterfront's founding legislation and the authorities it accords to Waterfront Toronto as a corporation.

- As a roadmap for completing the MIDP, the PDA has a number of principles around IP, data governance and privacy, public communications and government relations – which are intended to address public concerns in these areas. On interaction with governments the PDA references the key role of the IGSC.

Governance-specific points

- [redacted]

- I am open to this effort. As you may know Infrastructure Canada engages on high-level strategic issues and acts as a bridge back to the federal family, but does not get involved on issues that are otherwise better left with Waterfront Toronto's management and Board – such as oversight of operational matters.

- [redacted]

Quayside Executive Steering Committee – specific points

- The IGSC has typically met quarterly to consider the full range of issues with respect to the Waterfront Toronto Revitalization Initiative. More regular issue specific discussions have tended to take place at a project management or "Executive Steering Committee" level. This was our initial approach on Quayside

- [redacted]

- [redacted] As Waterfront was acting as the secretariat and rapporteur for Quayside ESC discussions, we will need to think of a way in which we can discuss Quayside matters strictly between the three governments when required.

Port Lands-specific points

- I understand that work on the Port Lands flood protection project is progressing and Waterfront is planning to start site mobilization this month.
- I would welcome any views you would like to share on the project from your perspective.

Next Steps for the CEO of Waterfront

- We thank Will Fleissig for his service and wish him well in his future endeavours.
- We welcome Michael Nobrega in his role as acting CEO, while he and the rest of the interim leadership team search for a permanent replacement.

Orientation of Ontario's New Government toward the Waterfront

- We would welcome any insights you could share on broad policy directions or government initiatives that may be relevant to Waterfront.

_____ _____

Glenn Campbell
Assistant Deputy Minister
Investment, Partnerships and Innovation

Date

Attachments (6):

Annex A – Media materials on Waterfront Toronto's CEO's resignation
Annex B – Master Innovation and Development Plan Newsletter and Related Media
Annex C – Draft summary of key elements of Partnership Development Agreement
Annex D – Proposed Agenda for July 16 meeting with City of Toronto and Ontario
Annex E – One-pager on waterfront governance – DRAFT
Annex F – Terms of Reference for the IGSC
Annex G – Proposed Principles for Data Trust Pilot, and INFC response

ATIA - 19(1)

Pichette, Chanelle (INFC)

From: Morin, Kathy (INFC)
Sent: July 16, 2018 4:30 PM
To: Nassif, Marie-Pier (INFC)
Subject: Fw: Quayside Q & A's
Attachments: WT PDA Board QA June 28 18.pdf

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Edward Chalupka <[redacted]@waterfrontoronto.ca>
Sent: Monday, July 16, 2018 4:29 PM
To: Carol Mercer; Kekanovich, Lynn (MOI); Tippins, Shawn (INFC); Campbell, Glenn (INFC); Morin, Kathy (INFC)
Cc: David Stonehouse; Erik Cunnington; Kristina Verner; Meg Davis
Subject: Quayside Q & A's

Further to our briefing on Friday please find attached a copy of the PDA Q&A that we shared with the board recently and that might be of further use to all of you as you are reviewing the PDA.

In addition, I have provided some a high level summary of the comments made by City staff and CreateTO in briefings form last week.

- Geography and references to the "Eastern Waterfront" in the PDA continue to be of concern to the City and is causing some "confusion". Eastern Waterfront is now synonymous with the Port Lands. There was discussion about removing or replacing the existing map in the PDA schedule with a map of the larger Designated Waterfront Area – doing so could pre-empt concerns that would be raised by the Create TO Board.

- There were general question raised about data and digital privacy and the role of WT's digital advisory panel. Specifically question regarding how the PDA will address these issues. The PDA looks at data and privacy at a principles (high) level and the MIDP will address them at a protocol level i.e. outline the overarching rules of how data and privacy will be governed. The principle implementation agreements themselves (post MIDP) will contain the specific policies and processes required for implementation. All elements of the project will be done in concurrence will the prevailing legislation.

- There was desire for CreateTO to facilitate a meeting between SWL and the film industry and studios in the Port Lands. It was agreed that those meetings could take place post PDA.

Hope this helps.

Ed

edward chalupka | director, government relations | **Waterfront Toronto** | 1310-20 bay street | toronto ON M5J 2N8 [redacted]
[redacted]@waterfrontoronto.ca | www.waterfrontoronto.ca

WATERFRONToronto

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A. Purpose of PDA and MIDP

1. Why is WT doing this? What's in this for WT?
   - WT is committed to developing the next phase of waterfront revitalization in a forward-looking and sustainable manner, which applies the best, most innovative and most relevant 'Smart City' ideas and technologies, alongside its commitments to affordable housing, climate change, mobility, social impact and the enhancement of an inclusive, 'liveable city' for the whole community.
   - To ensure that WT has access to the most innovative ideas and international best practice thinking, and potentially to accelerate the delivery of those ideas most relevant to Toronto, WT decided to seek a knowledge partner with whom it could work, who combines expertise with a significant funding capability. Following an international competition with a strong field, Sidewalk Labs, a sister company of Google within the Alphabet Group, was selected as WT's Innovation and Funding Partner.
   - The intention is that the selected partner should work collaboratively with WT to create a plan that will capture the best and most relevant of these ideas, ahead of the development of any buildings. This Master Innovation and Development Plan (MIDP), if approved, will shape the vision for the next phases of development, and hence the look, feel and operation of this part of the City. As a test-bed, the regeneration of the Quayside lands will provide a pilot application of the MIDP ideas.
   - As the revitalization lead for the waterfront and as steward of the public interest, WT's aim is to establish Quayside as a model for 21st century city-building — setting a new standard for delivering sustainable, inclusive, complete community development.
   - Through this project WT also aims to support the local and national technology sectors and creative industries, generating prosperity by growing the emerging industry hubs on the waterfront.
   - Create a financial plan that set minimum expectations of land value and rates of return that work at different scales, and satisfy the requirements of WT's Long Term Funding Plan

2. What is in this project for SWL?
   - SWL is doing this for four primary reasons:
     - SWL is a relatively new company. Toronto will be the first major world city in which they will have become involved as a strategic partner. So the partnership will be a powerful credential as they build their international reputation.
     - SWL will expect to earn revenues and other receipts from the implementation of their ideas at Quayside, through the participations which they will hope to negotiate with Waterfront Toronto, operating partners and other investors/funding partners.
     - SWL will be hopeful — over time — of recouping considerably more than their initial $50M commitment. None of this is guaranteed, and is all subject to the outcome of the MIDP, and the WT Board's approval of both the MIDP and the Implementation Agreements (as defined in the Plan Development Agreement), in whatever form they eventually take.

- SWL will be hoping to develop Intellectual Property (IP) and other innovations which could potentially be applied to other cities around the world, either independently or with WT and other partners, having been piloted at Quayside.

- All of the above can be expected to create value for SWL as a company and its shareholders. It is currently akin to a start-up, having been given a finite period by its parent, Alphabet (we don't know precisely how long) to establish itself as a profitable business.

3. What are the purposes of the MIDP and PDA? And what is a BIP?
   - The Master Innovation and Development Plan (MIDP) is the initial output of the partnership's collaborative research. It will be jointly created by WT and SWL, and will consist of multiple integrated sub-plans and ideas on infrastructure, public realm, mobility, sustainability, housing affordability, accessibility, built environment, and data governance and privacy.
   - The MIDP will also appraise and address the potential implementation of the ideas which it considers most relevant to Quayside, leading to the creation of various Implementation Agreements which will govern their delivery. These agreements will be based on principles set out within the MIDP.
   - The Plan Development Agreement (PDA) is the legal agreement between the partners which establishes the scope, budget, principles and governing structures for the creation of the MIDP.
   - Under the provisions of the PDA, both the MIDP and the various Implementation Agreements will each be subject to the respective approvals of the WT Board and SWL in their sole, absolute and unfettered discretion.
   - Neither the MIDP nor the PDA provides for the sale of any land, whether to SWL or anyone else, nor do they depend on the the sale of any land. The completion and approval of the MIDP does not of itself signal any right to implement all or any part of it. The approval of the Implementation Plans will be decided separately and subsequently to the approval of the MIDP.
   - Separately for WT's partnership with SWL, WT is required to develop Business and Implementation Plans (BIPs) for City review as per the Memorandum of Understanding (MOU), dated March 31, 2006 between WT and the City of Toronto. A BIP provides a detailed business and implementation strategy and work plan for implementing the revitalization of any precinct, district or parcel which includes City lands. These plans must be reviewed and commented on by the City, approved by Toronto City Council, and accepted or approved by the other orders of government that are providing funding for implementation of the plan.
   - WT's role as revitalization lead on City land in the East Bayfront and the Port Lands is contingent on a City Council approved BIP. Once the BIP is approved WT becomes the directing corporation for the revitalization of the City land addressed by that document.

4. What is the scope of the MIDP?
   - The scope of the MIDP is set out in detail within the PDA.
   - Specifically the MIDP will address the following:

- Establish a complete community that improves quality of life and increases economic opportunity for a diverse population of residents, workers, and visitors;
- Create a destination for people, companies, startups, and local organizations to advance solutions to the challenges facing cities, such as:
  - Climate Change
  - Affordability
  - Transportation, Mobility, and Congestion
  - Inclusivity and Diversity
  - Economic Opportunity
- Make Toronto a global hub for urban innovation with a specific focus to localize and maximize the economic development benefits associated with this objective;
- Demonstrate how the thoughtful infusion of technology into best-in-class urban design can create communities that are better able to serve the needs of citizens;
- Serve as a model for climate-positive sustainable neighbourhoods throughout Toronto and cities around the world;
- Create planning targets (massing, density, phasing and zoning) that reflect sound planning principles;
- Create a financial plan and economic targets that set minimum expectations of land value and rates of return that work at different scales; and
- Establish performance measures that if met justify replication of the development and innovation plan.

5. The MIDP will be a large document covering a number of disciplines, how will WT be able to review this document and verify that the proposal is in the public interest?
   - WT is planning a peer review of the document for the benefit of both WT and the City. WT is currently developing a scope of work and intends to conduct an RFP for these services later in the summer.

6. Does the PDA supercede the Framework Agreement? Does any of the Framework Agreement survive?
   - The PDA supersedes the Framework Agreement.
   - Some specific provisions that were within the Framework Agreement, such as satisfaction of the Initial Plan Milestones, have been transferred to and incorporated within the PDA. However, the Framework Agreement itself does not survive.

7. Will the PDA and the Framework Agreement be made public and when?
   - The PDA is currently scheduled to be brought to the Board for review and consideration at the meeting scheduled on July 31st.
   - Once the PDA has been considered and approved by the Board it will be made public as soon as practicable thereafter.
   - A communications plan for releasing the PDA is currently being developed by staff, with the support of Counsel Public Affairs, with a view to ensuring that a fair and accurate understanding of the agreement is communicated to the community, stakeholders and to the media.

- A summary of the Framework Agreement was published at the time of its completion. The Framework Agreement was only ever a paving document for the PDA itself, which upon its completion will terminate and supercede the Framework Agreement entirely.
- There has been discussion about whether the Framework Agreement document itself should or should not be published. Management and Counsel Public Affairs are preparing an analysis of options for the Board, for consideration at its meeting on July 9th.

8. Why has the PDA taken so long?
   - Given the construct and importance of the Innovation and Funding Partnership, it was very important that rigorous and thorough consideration was given to the form, management and funding of the relationship and work being contemplated.
   - As negotiations with SWL progressed, it became necessary to reset the purpose and construct of the partnership in order to make it consistent with both the objectives and the spirit of the Innovation and Funding Partner Request for Proposal (RFP). It was important that the terms of the PDA, and the scope of the MIDP, properly reflected this purpose and construct, and that the public interest was properly served as a result.

B. Parties

1. Who are the Parties to the PDA?
   - WT and Sidewalk Labs, LLC, a wholly-owned subsidiary of Alphabet Inc.
   - SWL will provide a description of SWL affiliates prior to the July 31st Board meeting

2. What's the status of Sidewalk Toronto?
   - Originally, the parties thought that Sidewalk Toronto could be used as a partnership entity; but now the relationship is being defined by contract only.
   - Sidewalk Toronto's role is limited to a Canadian funding entity for the US $50M. It is not a party to the PDA.

C. $50M Funding from SWL

1. Does the $50M count as equity in land?
   - No. It is explicitly stated in the PDA that the contribution from SWL for the preparation of the MIDP cannot be used as a payment for any land.
   - It is money totally at risk for SWL with no guaranteed return, and, if spent, is not refundable by WT, either in whole or in part, in the event that the PDA is terminated or the MIDP is not approved.
   - The treatment of the Sidewalk Funding Commitment or a portion thereof will be considered by the Parties in the Implementation Agreements and will be recognised within a distribution waterfall, to the extent that the parties include any profit-sharing formula.

2. What does the $50 million pay for? Who determines what the $50M is spent on?
   - The $50M , which is comprised of $10M which was spent prior to signing the PDA and another $40M for completion of the MIDP, covers:

  - Waterfront Toronto Reimbursables
  - Design, Planning, Engineering and Technical Services
  - Legal, Regulatory & Policy
  - Pilots
  - Financial & Business Planning
  - Facilities & Operations
  - Communications, External Affairs & Engagement
- WT reimbursables includes staff time, some consulting fees, but not third parties assisting in negotiations (legal, KPMG, NBLC, Michael Bernstein, Stephen Barter)
- WT approves the budget as set out in Schedule C in the PDA then detailed expenditures goes to the jointly run Project Management Committee (PMC) on a monthly basis.

3. Is the $50M paid to WT or held in escrow
   - No – SWL pays directly for costs including payment to WT for its reimbursables.

4. What does SWL get for the $50M?
   - Firstly, the $50M provides SWL with the opportunity to work with WT on creating the MIDP and to explore the technologies and innovations that are mutually of interest to both parties.
   - Secondly, the treatment of the Sidewalk Funding Commitment, or a portion thereof, will be considered by the Parties in the Implementation Agreements and, subject to WT approval, will be recognised within a distribution waterfall, to the extent that the parties include any profit-sharing formula. The Implementation Agreements are each subject to the Board's approval, and to the Board's prior approval of the MIDP.
   - WT will review expenditures in the budget via the Project Management Committee. (see Section J below)

5. How much of the $10M pre-PDA expenditure has already been spent? Is there any written agreement with SWL on the treatment of this money should the PDA not be signed? Is there an agreed budget?
   - Most of the $10M has been spent and there will be a reconciliation of the budgeted items with amounts previously spent.
   - The $10M up to signing of the PDA is SWL's risk should the PDA not be signed.
   - The PDA will govern the expenditures of the the remaining $40M, after the PDA is signed, through the Project Management Committee.
   - The entire $50M is SWL risk should the MIDP and subsequent Implementation Agreements not be approved.

6. Is Alphabet providing a guarantee to SWL's obligations, including the $50M? How strong is a letter of comfort?
   - We are willing to proceed with a comfort letter backing the $50M commitment from Alphabet Inc. Alphabet Inc. is a multi-billion dollar, publicly-traded company with adequate capital to fund these costs, and significant risk to reputation in not funding its commitments to a Government-controlled entity.

D. Procurement

A legal opinion from [redacted] of Dentons will be provided prior to the July 31st Board meeting.

1. If the $50M is equity, does this impact procurement during the MIDP?
   - The $50M is not being counted as equity or any form of payment toward Quayside or other lands. Therefore, Waterfront Toronto's procurement rules are not required to be imposed on the spending of those funds. However, Sidewalk Labs has agreed to abide by the terms contained within Schedule D.

2. What are the protocols and controls governing the way SWL procures its consultants etc. during the MIDP – how is this being coordinated with WT?
   - This will be done through the Project Management Committee (see Section J below)

3. How will the delivery of the horizontal infrastructure and the vertical buildings be procured? What role will SWL play in this?
   - This will be further set out in the MIDP, but the PDA sets out the Procurement Principles which will be followed.
   - The MIDP will identify technological innovations that at the time of their development can objectively and impartially be shown to have no suitable alternatives available in the market ("Purposeful Solutions").
   - The Implementation Agreements will contemplate competitive procurement processes, with limited exceptions allowing for Sidewalk Labs or its affiliates to provide Purposeful Solutions, but only on a fair and demonstrably arms'-length basis.
   - The Principal Implementation Agreements shall also specify that any procurement for a third party developer (or developers) to proceed with the design and construction of any above grade buildings in the Quayside Parcel, will be led by Waterfront Toronto and undertaken jointly by Waterfront Toronto and Sidewalk Labs. The MIDP will identify those circumstances and conditions under which Sidewalk Labs will act as Vertical Developer.

4. Section 2.03 (b) of the agreement says "the MIDP will identify those circumstances and conditions under which Sidewalk Labs will act as Vertical Developer". What does this mean, and why would WT consider it?
   - The research and development that is currently being undertaken for the MIDP contemplates implementing solutions that the market may not wish to or be able to deliver. As an example, the MIDP could propose a 30 story tall wood building that has modular sections and uses a recycled water system. If such a proposal was deemed beneficial and could obtain all the necessary approvals, there may not be a development company that would be willing to build it. Also it could be difficult to obtain debt funding for such an innovative proposal, and this may put further restrictions on the feasibility of such a project. If it can be proven that the market would not be willing to deliver this project but Sidewalk Labs would be so willing, it may be beneficial (subject ultimately to the approval of the WT Board) to give them the opportunity to do so.
   - The wording of this clause is deliberately nuanced.
     - Firstly, joint procurement will generally preclude SWL from being the vertical developer, unless the MIDP can demonstrate reasons why they should be the sole-sourced developer for a specific vertical development.

- Secondly, the MIDP will itself be subject to an independent peer review and will otherwise be subject to WT's sole, absolute and unfettered approval.
- Thirdly, any procurement will still be bound by WT's usual procurement standards in that the appointed party will have to demonstrate appropriate capability and value for money.
- Fourthly, given the ambition which is inherent in the MIDP's objectives, it is quite likely that there could be a number of 'Purposeful Solutions' proposed, which may not be profitable for local or other developers to undertake. It will therefore potentially be advantageous to WT in having the ability to look to Sidewalk Labs, backed by their substantial parent, to support and fund the implementation of these opportunities, thus enabling more worthwhile ideas to be delivered than might otherwise have been the case.
- WT will not be able to demand that SWL undertakes any specific horizontal or vertical development, where the MIDP has determined that SWL will act as the sole-sourced developer. It will ultimately be for SWL to decide, on a case by case basis, which of these specific ideas it wishes to deliver, supported potentially by its own funding. But it is clear that the constructive tension within the MIDP process could be used to positive effect.



Page 1093
is withheld
pursuant to paragraphs
20(1)(b), 20(1)(c) and 20(1)(d)
of the *Access to Information Act*

****

Le page 1093
font l'objet d'une exception totale
conformément aux dispositions des
paragraphes
20(1)(b), 20(1)(c) et 20(1)(d)
de la loi sur l'accès à l'information

ATIA - 20(1)(b)
ATIA - 20(1)(c)
ATIA - 20(1)(d)

[redacted]

F. Data Governance

1. What is the role of the Data Strategy Advisory Panel (DSAP)?
   - The DSAP members are expected to advise Waterfront Toronto on matters related to the following scope through both the PDA and MIDP:
     - Privacy
     - Cybersecurity
     - Data Governance
     - Intellectual Property
     - Shared Benefits/Business Models
     - Commercial and Operating Agreements
     - IT Architecture and Platforms

   - The DSAP acts as an independent body to guide and inform the revitalization of the Toronto waterfront on issues of digital governance. The DASP is advisory to WT management. The mission of the DSAP is to provide objective, professional advice to ensure that ethical use of technology, accountability, transparency, protection of personal privacy, data governance, cyber security together with the opportunity for broad and equitable benefits to be accrued from the intellectual property and data, are addressed in a robust way to encourage innovation and economic development and preserve the public good.
   - DSAP meetings are attended by members of WT internal and external legal counsel, including, but not limited to:
     - George Takach of McCarthy's – focused on IP and business models (including the notion of open source technologies, open data frameworks, and shared IP/shared benefit beyond the WT/SWL relationship).
     - Chantal Bernier of Denton's – focused on privacy, data/technology sovereignty and data residency issues

2. What involvement does the DSAP have on the PDA?

   - The DSAP will be reviewing the information contained in schedules of the PDA relating to IP and Digital Governance. Drafts of the documents will be shared with those members that return their signed Codes of Conduct and Confidentiality Agreements. Any recommendations from panelists will be considered by management and summarized for the WT Board of Directors prior to the request for approval of the PDA.
   - See Mandate Attached.

G. Role of SWL

1. Is SWL the co-master developer of Quayside and other land?
   - That term does not appear in the PDA. WT is the master developer of Quayside and the Port Lands in accordance with its mandate.

H. Implementation

1. Is there any understanding between SWL and WT on how the implementation agreements will be funded? Will SWL have first option to be the investor/funder or developer of the horizontal infrastructure?
   - This will be determined within the MIDP.
   - See also answers at: Section D, questions 3 & 4

2. What if the 'big ideas' can't be afforded or are not viable?
   - Essentially the MIDP examines affordability and viability. It is quite possible that some of the ideas considered will not be affordable, or, on analysis, will not be sufficiently developed (as technologies or applications) to be viable as yet.
   - Partners select ideas to be taken forward at Quayside or beyond if greater scale is needed, subject to landowner/Government approvals
   - All subject to Board approval
   - See also answers at: Section D, questions 3 & 4

3. Should WT be taking advantage of Alphabet's balance sheet to underwrite the implementation on Quayside?
   - SWL have currently made no financial commitment beyond their $50M contribution towards the costs of preparing the MIDP.
   - The MIDP will examine the funding and fundability of the various ideas contained within the MIDP.
   - See also answer to: Section D, question 4

4. How will the delivery of the horizontal infrastructure and the vertical buildings be procured? What role will SWL play in this?
   - See answers at: Section D, questions 3 & 4

I. Termination

1. How secure are the termination provisions – at the time of approval of the MIDP and at the time of approval of the implementation agreements – to ensure WT can walk away with no financial obligation to SWL or risk of bad faith accusations? What are the personal liabilities of the Directors (risk of piercing the corporate veil)?
   - Please see the following legal memo included in the July 9th Board Book
     - Sidewalk Transaction, Summary of Good Faith Responsibilities and related issues
     - Legal memo on Director's Duties and Potential Director Liability
2. In what circumstances can the PDA be terminated before completion of the MIDP?
   - By either party, if a dispute cannot be resolved in accordance with the dispute resolution procedure outlined in the Collaboration Principles of the PDA.
   - By either party, if Sidewalk Labs in good faith determines Waterfront Toronto Approval (Board and governments, as required) will not be obtained for the MIDP or Implementation Agreements, and suspends funding which suspension continues for 45 consecutive days.
   - by mutual agreement to terminate.

J. Project Management

1. How is the MIDP being managed
   - The Project Management Committee (PMC) is the jointly run management body for the Sidewalk Toronto partnership in the planning and deliver of the MIDP. The purpose of the PMC is to provide for greater transparency and set the structure under which the MIDP is developed and the shared project objectives realized. The PMC will meet on a bi-weekly basis with the following mandate:
     1. Establishment and tracking of the high level timeline and milestones for the project
     2. Set strategy for high-level shared MIDP objectives
     3. Manage and report on the status of deliverables with respect to:
        a. Pillars / MIDP development
        b. Financial analysis
        c. High level PR/GR strategies/issues
     4. Management of the Project Management Plan specific to the Master Planning exercise
     5. Track and approve the spend of the $50 million USD budget for joint MIDP creation
     6. Resourcing analysis - identification of gaps and associated solutions
     7. Identification and resolution of issues/friction points - focused on day-to-day project implementation decisions
     8. Provide a record of decision making for stakeholders

2. How is progress on the MIDP, spend, emerging results etc. to be reported to the Board?
   - WT staff will report regularly through the IREQ committee to the Board at each Board meeting.
   - Quayside specific Board meetings may be required during the creation of the MIDP and around the time that WT staff may seek IREQ and Board approval.

3. What will be the role of the IREQ?
   - IREQ's role is to assist the Board of Directors in fulfilling its oversight obligations with respect to real estate and investment matters, and specifically, the Quayside project.
   - The Committee will provide strategic review and advice for recommendations to the Board on approvals sought in connection with the Quayside project.

K. 307 Lake Shore Blvd. East (LSBE)

1. What is the purpose of 307 LSBE (or 307)? Given that a portion of the $50M pays for 307, how much of that qualifies as a contribution to the project?

   - 307 Lakeshore serves two key purposes:
     i. This will serve as the Toronto offices of Sidewalk Labs; and,
     ii. A civic workshop where prototyping and public engagement can occur.

   - In terms of what portion of the expenses will be counted towards the project, only the portion which is considered the civic workshop space will be enumerated

towards the budget. The core Sidewalk Labs office space will not be factored into the contribution amount.

L. Communications

1. What or who is "Sidewalk Toronto"?

   - Sidewalk Toronto is a brand name for our joint effort in creating the Master Innovation and Development Plan. The name and related branding was jointly agreed to by Sidewalk Labs and Waterfront Toronto in connection with announcing the partner selection last fall and launching the public engagement plan. It is used on all public facing materials and is most often accompanied by the logos of Waterfront Toronto and Sidewalk Labs (in particular on all public consultation materials). Both "Sidewalk Toronto" and "Quayside" are strongly associated with the project.

2. How will the completion of the PDA be publicly announced?
   - A communications plan for releasing the PDA is currently being developed by staff, with the support of Counsel Public Affairs, with a view of ensuring a fair and accurate understanding of the agreement is communicated to the community, stakeholders and the media.
   - As part of this communications planning, staff and Counsel Public Affairs are also preparing an analysis of options that includes: (a) releasing the Framework Agreement concurrently with the PDA, (b) releasing the Framework Agreement separately from the PDA, and (c) not releasing the Framework Agreement.
   - This communications plan, analysis and a recommendation will be prepared for the July 9th meeting.
   - The communications plan will include:
     - Pre-briefings with Board and government stakeholders, elected officials
     - Press release, backgrounder, key messages, Q&A
     - Media briefings and scheduled interviews
     - Social media promotion

3. What is the engagement process during the MIDP?
   - A public engagement plan was published in February that details the variety of ways through which public input and feedback will be sought to inform the MIDP, this includes large format roundtables and smaller scale (grassroots) community engagements. The timeline for the project has been extended into next spring, allowing more time for creating the MIDP and providing more opportunities for public input. This includes publishing a draft of the MIDP and adding another roundtable to solicit feedback on the draft.
   - In coordination with the public engagement plan, the project team will also make presentations to and seek feedback and advice from WT's Design Review Panel (DRP) and Digital Strategy Advisory Panel (DSAP).
   - As the plan advances, the project team will continue to engage governments (departments, ministries, staff) and government agencies for feedback and direction on a regular basis

4. How are City, Provincial and Federal Governments being briefed?
   - All three levels of our Government Stakeholders are being briefed through the Intergovernmental Steering Committee (IGSC) which meets quarterly or more often as required by the project.

Pichette, Chanelle (INFC)

From: Morin, Kathy (INFC)
Sent: July 20, 2018 11:23 AM
To: Nassif, Marie-Pier (INFC)
Subject: FW: WT Governance Structure - Memo for Marc

Importance: High

As discussed attached is the 2 pager and the very draft version of the accord.

IPI POB comments Gove... Two Pager Governance Stru... 20180719 - WT Accord (Draft).d...

From: Morin, Kathy (INFC)
Sent: July 13, 2018 10:25 AM
To: Matharu, Krishen (INFC) <krishen.matharu@canada.ca>; Tippins, Shawn (INFC) <shawn.tippins@canada.ca>
Cc: Nassif, Marie-Pier (INFC) <marie-pier.nassif@canada.ca>
Subject: RE: WT Governance Structure - Memo for Marc

HI All
Thanks for this. Shawn there are a few key things that I flagged in the write up see attached. Also copying Marie-Pier as some of these items related to the OC and how we messaged the org structure to Marc.

<< File: Two Pager Governance Structure of the Waterfront Toronto Revitalization Initiative KM Comments.docx >>

From: Matharu, Krishen (INFC)
Sent: July 13, 2018 10:14 AM
To: Morin, Kathy (INFC) <kathy.morin@canada.ca>; Tippins, Shawn (INFC) <shawn.tippins@canada.ca>
Subject: RE: WT Governance Structure - Memo for Marc

Hi Shawn and Kathy,

I added some comments in the email below (green text) and made some changes in the chart – for consideration.

Also, I prefer the new look & feel!

<< File: IPI & POB comments Governance Chart - NEW.ppt >>

1: We need to have a structure for PLFP and one for Quayside Agreed. See attached draft Quayside diagram that was tabled by WT at the April 20 QESC. It's unclear to me if the diagram was agreed to, but it seems to be the only visual

representation of Quayside governance available – in PDF, so not easy to manipulate. It's inspired by the Port Lands governance structure. One major question is whether it will continue to have a QESC going forward. "Federal" is only represented on Quayside ESC at the IGSC and TWG. It appears INFC would receive updates on Quayside at the TWG? How is this different from the PLFP? If it is the same perhaps we can include in one model (see attached).
2: PDT should report to WT staff not the other way around (PowerPoint formatting issue – I think I fixed this in the revised version)
3: What are the "sub-committees" (These are the relevant committees of the Board of Directors – I list them all in the revised version attached – maybe only need to list relevant ones) I don't think we need to list these – they are internal committees to WT and don't have any relevance to INFC. We could even remove the entire box. (deleted in attached doc)
4: Under TWG what do you mean by "mandate renewal"? (this is a reference to mandate renewal under the TWG para in the IGSC ToR) I suggest removing "mandate renewal" and just keeping something like "coordination/consultation".. not sure about "oversight" given the TWG is an informal committee without Terms of Reference, and was created as a staff working-level forum [redacted] It took on the role of prepping/coordinating for the IGSC as well.
Agreed with the mandate renewal have no idea what they mean by that.
5:There should be a link that fees the OC, which would be the WT staff and I assume that there would be an OC for the province and the city as well. (I've linked the WT Staff box to the OC; the OC box now refers to OCs in the plural, to also imply an OC for the prov and one for the City as well). I don't think we should include OCs at the Prov/City level – we don't know what the other Govs have in mind and it will raise more questions (especially in terms of overburdening WT – e.g. why not have 1 OC for all govs instead of 3 separate ones?)
NO we cant have one OC the whole point of having an OC with WT was to deal with issues that aren't common to all three levels and not have a partnership. Having said that don't need to show the other OC's
6:The membership info needs to be update (tried to updating based on my knowledge – there may still be some innacuracies)
7: Should have a one-pager with key functions of each and justification for proposed structure. (see attached draft two-pager doc, attached).

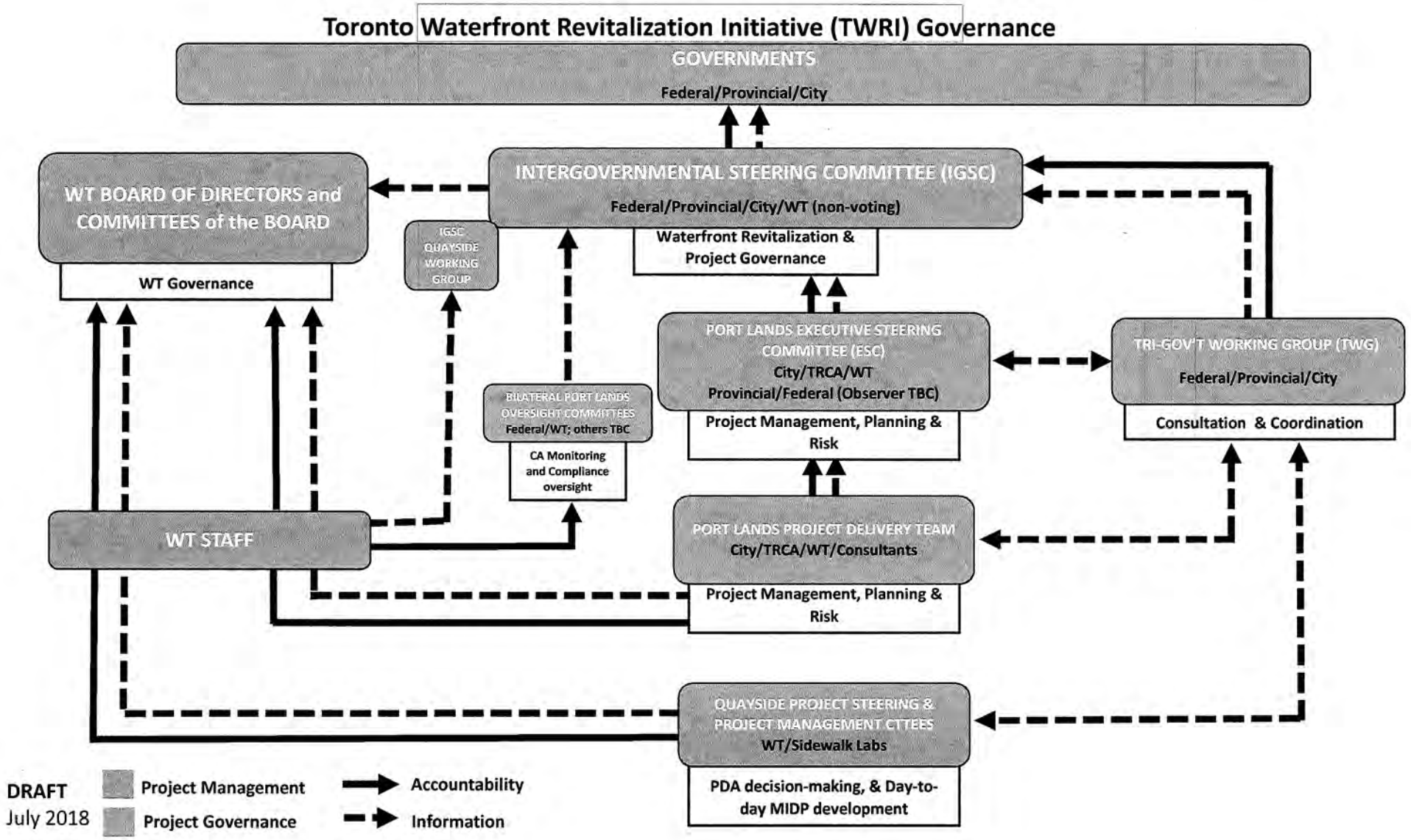
From: Tippins, Shawn (INFC)
Sent: July 11, 2018 4:40 PM
To: Matharu, Krishen (INFC) <krishen.matharu@canada.ca>
Cc: Morin, Kathy (INFC) <kathy.morin@canada.ca>
Subject: RE: WT Governance Structure - Memo for Marc
Importance: High

Tanks for this. When Kathy, Glenn and I were chatting after meeting with the DM two or so weeks ago, Glenn suggested, in depicting the O.C. visually in the diagram, to see if there was a way that it could be drawn "closer" to the rest of the org structure, maybe alongside or as a sub-component of the ESC . See attached: I'm no big expert at P.P., but I've taken a shot at trying to make the O.C. look a little more "integrated" with the rest of the governance structure. At the same time I've tried to respect its separate nature and preserve the reporting lines as intended. Let me know what you think. Thx.
<< File: IPI comments Governance Chart.pptx >>

From: Matharu, Krishen (INFC)
Sent: July 11, 2018 12:53 PM
To: Tippins, Shawn (INFC) <shawn.tippins@canada.ca>
Cc: Morin, Kathy (INFC) <kathy.morin@canada.ca>
Subject: FW: WT Governance Structure - Memo for Marc

Hi Shawn, here is what was prepared re: governance

<< File: WT Governance Structure Notes.docx >> << File: Annex C - Governance Chart (Draft).pptx >>


Toronto Waterfront Revitalization Initiative (TWRI) Governance
GOVERNMENTS
Federal/Provincial/City
INTERGOVERNMENTAL STEERING COMMITTEE (IGSC)
Federal/Provincial/City/WT (non-voting)
Waterfront Revitalization & Project Governance
WT BOARD OF DIRECTORS and COMMITTEES of the BOARD
WT Governance
IGSC QUAYSIDE WORKING GROUP
PORT LANDS EXECUTIVE STEERING COMMITTEE (ESC)
City/TRCA/WT
Provincial/Federal (Observer TBC)
Project Management, Planning & Risk
TRI-GOV'T WORKING GROUP (TWG)
Federal/Provincial/City
Consultation & Coordination
BILATERAL PORT LANDS OVERSIGHT COMMITTEES
Federal/WT; others TBC
CA Monitoring and Compliance oversight
WT STAFF
PORT LANDS PROJECT DELIVERY TEAM
City/TRCA/WT/Consultants
Project Management, Planning & Risk
QUAYSIDE PROJECT STEERING & PROJECT MANAGEMENT CTTEES
WT/Sidewalk Labs
PDA decision-making, & Day-to-day MIDP development
DRAFT
July 2018
Project Management
Project Governance
Accountability
Information

MEMBERSHIP FOR PORT LANDS FLOOD PROTECTION GOVERNANCE

	INTERGOVERNMENTAL STEERING COMMITTEE (IGSC)	WORKING GROUP (TWG)	PORT LANDS EXECUTIVE STEERING COMMITTEE (ESC)
Federal	Deputy Minister, Infrastructure and Communities	Director, Program Operations Branch, Infrastructure Canada	
	Associate Deputy Minister, Infrastructure and Communities	Program Analyst, Program Operations Branch, Infrastructure Canada	Director, Program Operations Branch, Infrastructure Canada (Observer)
	Assistant Deputy Minister, Infrastructure and Communities Program Operations Branch	Junior Program Analyst, Program Operations Branch, Infrastructure Canada	
Provincial	Deputy Minister, Ministry of Infrastructure	Director, Realty Policy Branch, Ministry of Infrastructure	Assistant Deputy Minister, Realty Division, Ministry of Infrastructure (Active Observer)
	Assistant Deputy Minister, Realty Division, Ministry of Infrastructure	Manager, Realty Policy Branch, Ministry of Infrastructure	
City	City Manager	Director Waterfront Secretariat	Deputy City Manager
	Deputy City Manager	Senior Corporate Management and Policy Consultant, Strategic & Corporate Policy, City Manager's Office	
WT	President & CEO		President & CEO
TRCA			CEO

September 25, 2017

Governance of the Waterfront Toronto Revitalization Initiative (TWRI):

The Government of Canada, the Province of Ontario and the City of Toronto created Waterfront Toronto in 2001 to oversee and lead the renewal of Toronto's waterfront. Waterfront Toronto is a corporation funded by three levels of government. As a tri-government organization, Waterfront Toronto is fully accountable to the governments of Canada, Ontario and the City of Toronto. Waterfront Toronto's priorities are set jointly, annually, with its government partners. Each government approves all of its funding to Waterfront Toronto through detailed and binding contribution agreements. A strong, expert and engaged 12-member Board of Directors, appointed by the three levels of government, oversees the strategic direction.

Waterfront Toronto Board of Directors

The governments make appointments to the Waterfront Toronto Board of Directors. According to the *Toronto Waterfront Revitalization Corporation Act* the three orders of government each appoint four members, with one additional member jointly appointed by all three orders.

Terms are for 3 years with no limit on reappointments. The member jointly appointed by all three levels is to be Chair of the Board of Directors. However, the Act has a provision to allow the board members themselves to choose a Chair from existing board members in the absence of this appointee.

The Board of Directors is accountable, through the Chair, to the three orders of government for the oversight and governance of WT; setting goals, objectives and strategic direction for WT within its mandate; and for carrying out the roles and responsibilities assigned to it by the Act, and applicable WT policies and directives.

Waterfront Toronto CEO

The CEO is accountable to the Board of Directors for the management and administration of WT, the supervision of staff, and carrying out the roles and responsibilities assigned by the Board, WT constituting instrument, this MOU and CAs. The CEO works under the direction of the Chair to implement policy and operational decisions. The CEO reports WT's results to the Board, through the Chair.

Intergovernmental Steering Committee (IGSC)

The Intergovernmental Steering Committee (IGSC) is the chief mechanism for oversight of the relationship between the three orders of government and Waterfront Toronto. The IGSC serves as an executive level focal point for intergovernmental management and coordination on matters related to the TWRI. Specifically, the IGSC:

- Ensures adherence to the articles of incorporation and that WT respects the objectives of redeveloping the waterfront as set out in the Act. issues related to waterfront revitalization and Waterfront Toronto, when necessary;
- Coordinates activities between the three levels of government and Waterfront Toronto;
- Serves as a forum for information exchange related to the implementation of tri-government funded projects;

- Undertakes joint planning exercises to ensure that proposed projects are in keeping with the goals and objectives and mandate of the TWRI and Waterfront Toronto;
- Provides feedback on Waterfront Toronto's Annual Corporate Plan to the Waterfront Toronto Board;
- Establishes working groups, as required, to provide advice and direction on sub-issues; and
- Establishes project-based executive steering committees, as required, to direct and implement the delivery of government supported waterfront revitalization projects.

Tri-Government Working Group (TWG)
The governments will continue to maintain Waterfront Secretariats. Staff of these secretariats will meet regularly as the tri-government Working Group (TWG), in support of the IGSC.

The TWG is comprised of Secretariat staff from each level of government. Secretariat staff are responsible for drafting records of discussions, following up on decisions and actions, disseminating information, distributing meeting documentation, scheduling meetings, logistical arrangements, and ensuring proper communication channels are in place to coordinate with Waterfront Toronto and project-based executive steering committees.

Secretariat staff may also request staff from other government departments/divisions, as well as Waterfront Toronto, to provide their expertise and feedback to the TWG on an as-needed basis.

Oversight Committee (OC)
With Respect to the Port Lands Flood Protection and enabling Infrastructure Contribution Agreement (PLFP CA), an Infrastructure Canada – Waterfront Toronto Oversight Committee is specified as per Schedule C of the Agreement to oversee Waterfront Toronto's adherence to INFC's funding conditions under the agreement.

Executive Steering Committees (ESC)
An ESC has been established for the PLFP CA that deals with matters related to project oversight, planning and risk.

Project Delivery Team
The Project Delivery Team will be comprised of Waterfront Toronto and specific partners who will deliver the project and will include senior project manager staff/directors from other participating organizations and key consultants. Waterfront Toronto will be responsible for drafting records of discussions, following up on decisions and actions, disseminating information, distributing meeting documentation, scheduling meetings and logistical arrangements, as required

Quayside Project Steering Committee

This is an internal Waterfront Toronto/Sidewalk Labs executive leadership committee with representation from both organizations. It will be the formal decision-making mechanism under the Partnership Development Agreement (PDA).

Quayside Project Management Committee

Reporting to the Quayside Project Steering Committee, the Project Management Committee is and internal Waterfront Toronto/Sidewalk Labs committee that will oversee day-to-day collaboration in developing the Master Innovation and Development Plan (MIDP).

Pages 1107-1122
are withheld
pursuant to paragraphs
14(a), 21(1)(a) and 21(1)(b)
of the *Access to Information Act*

****

Les pages 1107-1122
font l'objet d'une exception totale
conformément aux dispositions des
paragraphes
14(a), 21(1)(a) et 21(1)(b)
de la loi sur l'accès à l'information

ATIA - 19(1)

Pichette, Chanelle (INFC)

From: Soler, Roger (INFC)
Sent: October 29, 2018 9:44 PM
To: MacFarlane, Shainah (INFC); McCallum, Robert (INFC)
Cc: Coffin, Erin (INFC); Pichette, Chanelle (INFC)
Subject: FW: Dashboards
Attachments: Appendix 1 Portfolio Dashboard Sept 5 2018.pdf; PLFP Dashboard_August 2018 _Comparative_Oct11.pdf; MIDP Program Dashboard Oct 2018 DRAFT.PDF

Shainah,
Could you pls follow up with Erin on this?
Thanks,
Roger

From: Tippins, Shawn (INFC)
Sent: Monday, October 29, 2018 5:45 PM
To: Coffin, Erin (INFC) <erin.coffin@canada.ca>; Soler, Roger (INFC) <roger.soler@canada.ca>
Cc: Faraday-Smith, Nancy (INFC) <nancy.faraday-smith@canada.ca>
Subject: FW: Dashboards

Hi Erin, Roger

Last week the City shared some feedback with WT on the Dashboards they've developing for the purposes of updating the IGSC on Key projects when it meets. I was wondering if either of you may have any additional comments that you may wish to provide on the PLFP or the Portfolio-level dashboard WT has provided beyond what Brett has provided below.

Fyi, we've been struggling with dates, but it looks like the next IGSC will take place from 2:30 – 4:30 pm on Tues, November 13th. So the briefing binder machine for IGSC will be cranking up over the next week. Fyi that our next TWG call will be this Thursday from 11-12pm. Erin, I believe you received the invite for the call from Andrea Broughton at the City. You are welcome to join us in Nancy's office for it if you like.

Thanks, ST.

Shawn Tippins

Senior Analyst,
Investment, Partnerships and Innovation Branch
Infrastructure Canada / Government of Canada
shawn.tippins@canada.ca / Tel: 613-854-7639

Analyste principal,
Direction générlae des investissements, des partenariats et de l'innovation
Infrastructure Canada / Gouvernement du Canada
shawn.tippins@canada.ca / Tél. : 613-854-7639

From: Brett Howell [mailto[redacted]@toronto.ca]
Sent: October 24, 2018 9:25 AM
To: 'Edward Chalupka' <[redacted]@waterfrontoronto.ca>; Faraday-Smith, Nancy (INFC) <nancy.faraday-

smith@canada.ca>; Tippins, Shawn (INFC) <shawn.tippins@canada.ca>; Wendy Ren (wendy.ren@ontario.ca) <wendy.ren@ontario.ca>; Whitehead, Cam (MOI) <Cam.Whitehead@ontario.ca>; David Stonehouse <David.Stonehouse@toronto.ca>
Cc: Cameron MacKay <CMacKay@waterfrontoronto.ca>; Lisa Taylor <LTaylor@waterfrontoronto.ca>; David Kusturin <DKusturin@waterfrontoronto.ca>; Meg Davis <MDavis@waterfrontoronto.ca>
Subject: RE: Dashboards

Hi Ed,

Here are the City's comments for the dashboards:

General:
- At the top of each dashboard identify the timeframe for the dashboard (i.e. Monthly or Quarterly?)

PLFP Dashboard
- I understand that you received comments from the Port Lands ESC already. The comments below are in addition and mostly my own
- Insert header for government funding
    - Funding to date by government partner
    - Forecast funding for the remainder of the fiscal year by government partner
    - WT Float status
- Program Risk Status
    - For Medium Risk and High Risk Projects there needs to be a separate header that describes a proposed plan
    - In the High Risk description change "forest" to "forecast"
- Key Risks and Impacts
    - For project schedule, show expected values in days or weeks. Hard to understand 1.80Mo
- Financial Summary
    - Put values in $ Millions with 2 decimals?
- Consider a contingency header and discussion

Waterfront Toronto Dashboard
- Program Risk Status
    - For Medium Risk and High Risk Projects there needs to be a separate header that describes a proposed plan

MIDP
- Program Budget Status
    - Show in $ Millions
- Program Schedule Status
    - Government engagement needs to be expanded to illustrate key government check-ins. Difficult to determine if these timelines are realistic as presented
- Dashboard
    - Difficult to read pie chart labels
    - Government Engagement pie chart needs to be rethought

We are happy to review future drafts.

Cheers,

Brett Howell MCIP, RPP

Technical Coordinator
Waterfront Secretariat, City Planning Division
12th Floor East Tower, Toronto City Hall
100 Queen Street West | Toronto, ON | M5H 2N2
T: [redacted] | F: 416-392-8805
E: [redacted]@toronto.ca

From: Edward Chalupka [mailto[redacted]@waterfrontoronto.ca]
Sent: October 12, 2018 4:14 PM
To: Faraday-Smith, Nancy (INFC) <nancy.faraday-smith@canada.ca>; Tippins, Shawn (INFC) <shawn.tippins@canada.ca>; Wendy Ren (wendy.ren@ontario.ca) <wendy.ren@ontario.ca>; Whitehead, Cam (MOI) <Cam.Whitehead@ontario.ca>; David Stonehouse <David.Stonehouse@toronto.ca>; Brett Howell [redacted]@toronto.ca>
Cc: Cameron MacKay <CMacKay@waterfrontoronto.ca>; Lisa Taylor <LTaylor@waterfrontoronto.ca>; David Kusturin <DKusturin@waterfrontoronto.ca>; Meg Davis <MDavis@waterfrontoronto.ca>
Subject: Dashboards

Hi –

In advance of Tuesday TWG meeting I wanted to forward you current drafts of three dashboards – Port Lands, Quayside and what we call our Portfolio dashboard (which effectively covers everything else). As we had discussed last week we would appreciate your feedback to ensure that we are providing you with information at the appropriate level of detail for the next IGSC meeting.

Please review and happy to discuss further on Tuesday's call.

Hope you all have a good weekend.

Ed

edward chalupka | director, government relations | **Waterfront Toronto** | 1310-20 bay street | toronto ON M5J 2N8 | [redacted]@waterfrontoronto.ca | www.waterfrontoronto.ca

WATERFRONTToronto

Waterfront Toronto - Portfolio Dashboard

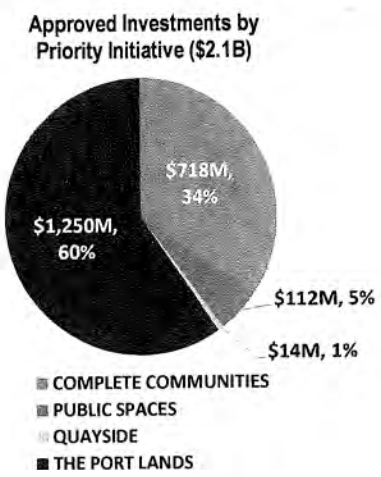
As at June 30, 2018

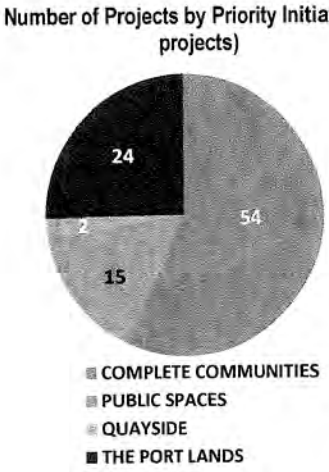
PROGRAM STATUS

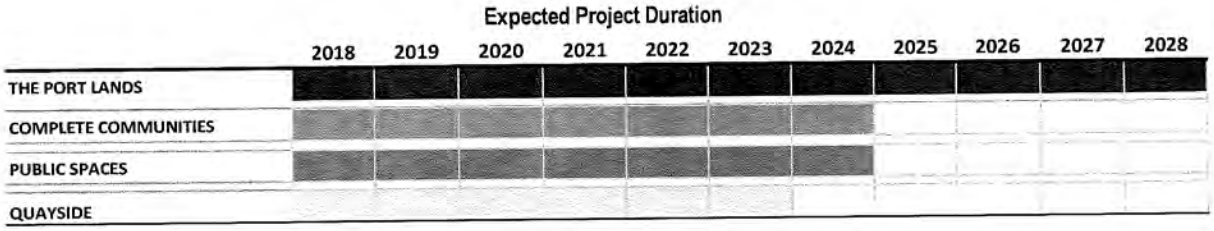
OVERALL STATUS | BUDGET STATUS | SCHEDULE STATUS

Q1 2018-2019 Update: Waterfront Toronto is currently tracking to deliver all of its projects on budget and is in compliance with its contractual obligations. Schedule risks are being closely monitored to ensure timely project delivery.

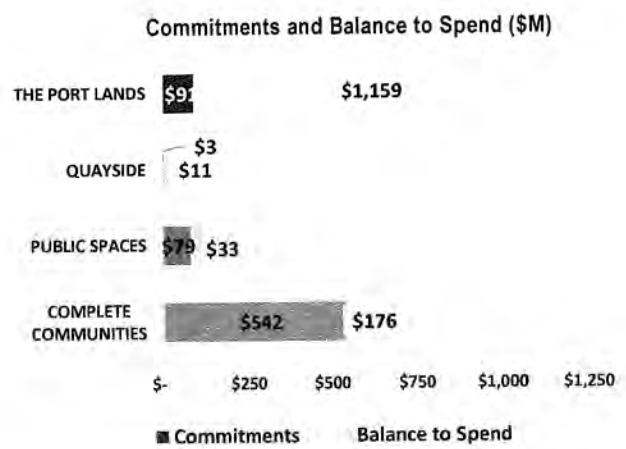
PROGRAM SUMMARY

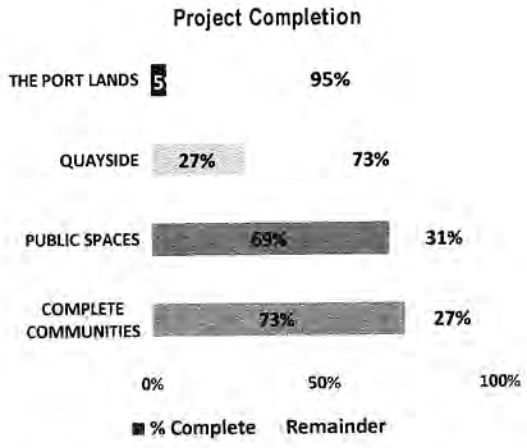






PROGRAM IMPLEMENTATION INDICATORS



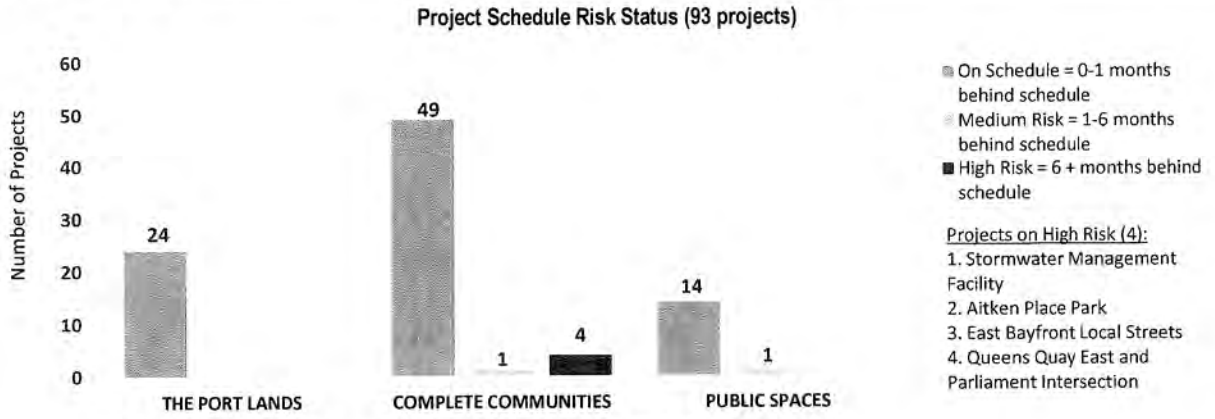




Waterfront Toronto - Portfolio Dashboard

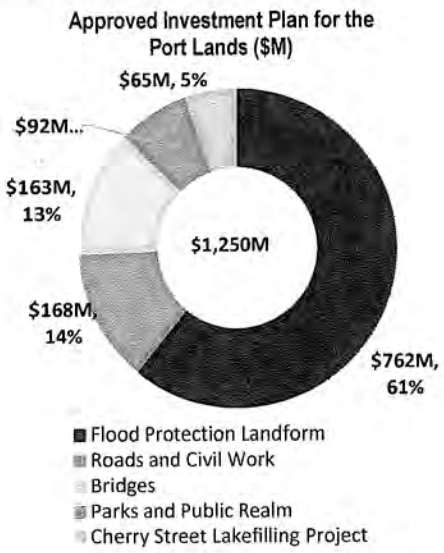
As at June 30, 2018

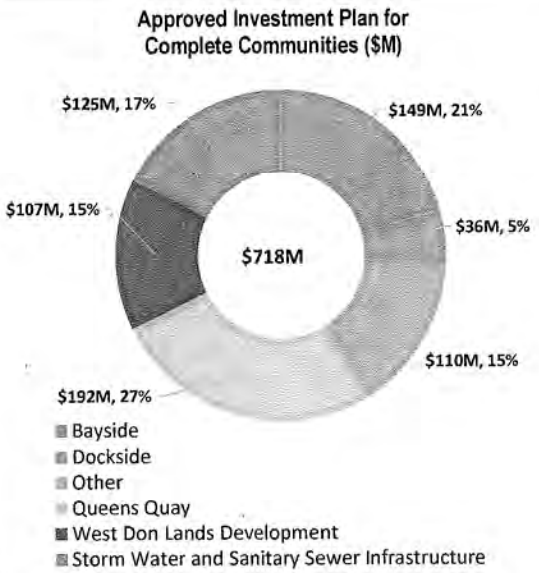
PROGRAM RISK STATUS

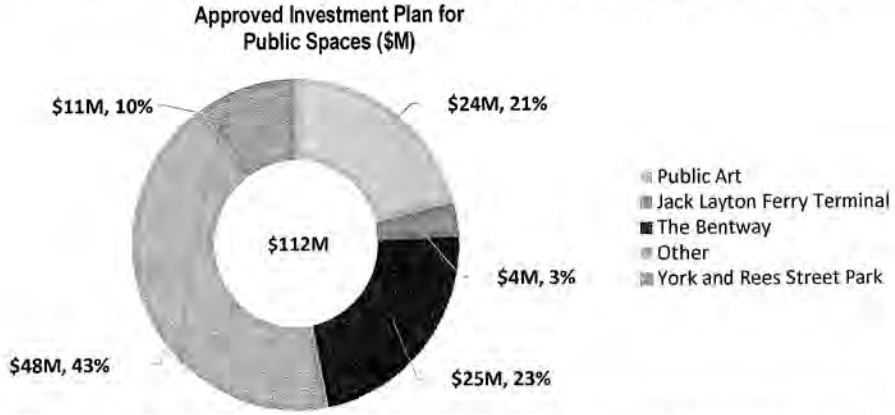


Note: Quayside project risks will be reported in the next version of the Portfolio Dashboard.

INVESTMENT BY PRIORITY INITIATIVE









Pages 1128-1133
are withheld
pursuant to paragraph
20(1)(b)
of the *Access to Information Act*

****

Les pages 1128-1133
font l'objet d'une exception totale
conformément à la disposition de paragraphe
20(1)(b)
de la loi sur l'accès à l'information

Pichette, Chanelle (INFC)

From: MacFarlane, Shainah (INFC)
Sent: November 7, 2018 9:53 AM
To: Tippins, Shawn (INFC)
Cc: Nassif, Marie-Pier (INFC); Coffin, Erin (INFC)
Subject: RE: IGSC Materials

These work. Much appreciated!

Shainah

From: Tippins, Shawn (INFC)
Sent: November 7, 2018 9:51 AM
To: MacFarlane, Shainah (INFC) <shainah.macfarlane@canada.ca>
Cc: Nassif, Marie-Pier (INFC) <marie-pier.nassif@canada.ca>; Coffin, Erin (INFC) <erin.coffin@canada.ca>
Subject: RE: IGSC Materials

Re-saved. Hopefully these will open for you. Note also deck on WT comms approach to responding to AG audit – developed prior to the delivery of the report.

G:\OFFICE OF INFRASTRUCTURE OF CANADA\WATERFRONT TO\Memos\Nov 13 IGSC

From: MacFarlane, Shainah (INFC)
Sent: November 7, 2018 9:02 AM
To: Tippins, Shawn (INFC) <shawn.tippins@canada.ca>
Cc: Nassif, Marie-Pier (INFC) <marie-pier.nassif@canada.ca>; Coffin, Erin (INFC) <erin.coffin@canada.ca>
Subject: RE: IGSC Materials

Hi Shawn,

The Cherry Street and PLFP dashboards that you sent both as attachments and when accessed through the G drive file are not accessible – a message pops up stating that "There was an error opening this document. The file is damaged and could not be repaired."

If you could attempt to send a new version it would be greatly appreciated!

Best,

Shainah

From: Tippins, Shawn (INFC)
Sent: November 7, 2018 7:10 AM
To: Nassif, Marie-Pier (INFC) <marie-pier.nassif@canada.ca>; Coffin, Erin (INFC) <erin.coffin@canada.ca>; MacFarlane, Shainah (INFC) <shainah.macfarlane@canada.ca>
Subject: RE: IGSC Materials

Hi – As mentioned WT sent along a number of additional and revised versions of documents for the IGSC meeting on Tuesday afternoon. I have populated the link the below with these items. FYI please note the Cherry Street, PLFP and

portfolio dashboards that were included as part of the package Ed sent last night (attached for your convenience). Many thanks, ST.

G:\OFFICE OF INFRASTRUCTURE OF CANADA\WATERFRONT TO\Memos\Nov 13 IGSC

From: Tippins, Shawn (INFC)
Sent: November 6, 2018 6:10 PM
To: David Stonehouse <David.Stonehouse@toronto.ca>; 'Brett Howell' <[redacted]@toronto.ca>; 'Mike Yu' <[redacted]@toronto.ca>; Wendy Ren (wendy.ren@ontario.ca) <wendy.ren@ontario.ca>; 'Manning, Catalina (MOI)' <Catalina.Manning@ontario.ca>; Whitehead, Cam (MOI) <Cam.Whitehead@ontario.ca>
Cc: 'Edward Chalupka' <[redacted]@waterfrontoronto.ca>; 'Andrea Broughton' <[redacted]@toronto.ca>
Subject: IGSC Materials
Importance: High

Dear TWG colleagues:

With many thanks to Ed attached please find the materials to support the IGSC meeting taking the 24th floor East tower boardroom at Toronto City Hall from from2:30pm -4:40pm on November 13th, as outlined below. Please re-disseminate within your respective organizations as appropriate. Grateful if ALL could confirm receipt of these attachments. Please don't hesitate to contact me if you have any questions. ST.

1. The agenda
2. Minutes from Sept 6th IGSC
3. Quayside:
    - Quayside MIDP Update Deck/Approach to Evaluation
    - Quayside MIDP Dashboard
    - Update on Digital Governance Issues BN
    - Quayside Comms Slide deck

4. PLFP Update:
    - Quarterly Program Portfolio Dashboard
    - Cherry Street Lake filling Dashboard Report – Note we are not changing the format of this report to match the other dashboards as the project is nearing completion.
    - PLFP Dashboard

5. Year Strategic Pan – Latest copy Marisa sent out this afternoon attached.

6. AG – Update presentation (provided by WT)

Shawn Tippins

Senior Analyst,
Investment, Partnerships and Innovation Branch
Infrastructure Canada / Government of Canada
shawn.tippins@canada.ca / Tel: 613-854-7639

Analyste principal,
Direction génerlae des investissements, des partenariats et de l'innovation
Infrastructure Canada / Gouvernement du Canada
shawn.tippins@canada.ca / Tél. : 613-854-7639

Pages 1136-1137
are withheld
pursuant to paragraph
20(1)(b)
of the *Access to Information Act*

****

Les pages 1136-1137
font l'objet d'une exception totale
conformément à la disposition de paragraphe
20(1)(b)
de la loi sur l'accès à l'information

PLFP Monthly Program Dashboard - as of September 30th, 2018

Issued: November 2nd, 2018

PROGRAM SUMMARY

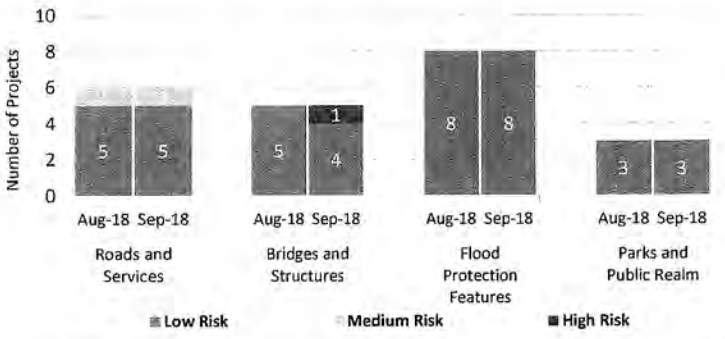
CUMULATIVE STATUS **BUDGET STATUS** **SCHEDULE STATUS**

Q2 2018-19 UPDATE:

Waterfront Toronto is tracking the progress of the Port Lands Flood Protection (PLFP) Program and is proceeding in accordance with the contractual budget and schedule obligations. Schedule and budget risks are being closely monitored to ensure program delivery.

PROGRAM RISK STATUS

Program Risk - by Segment



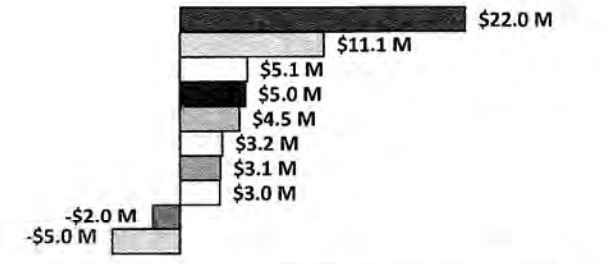
Low Risk	- On Schedule/0-1 months behind schedule - Forecast to complete within approved budget
Medium Risk	- 1-6 months behind schedule - Forecast to complete within 10% of approved budget
High Risk	- 6+ months behind schedule - Forecast to complete more than 10% over approved budget

Project Name	Budget	Schedule
Commissioners St. West to New Cherry St.		
Commissioners St. East to Saulter St.		
Cherry Street Re-alignment		
Don Roadway North		
Hydro One Integration		
Site Wide Municipal Infrastructure		
Roads and Services		
Cherry Keating-Cherry Street Bridge North		
Cherry Polson-Cherry Street Bridge South		
Commissioners Street Bridge		
Old Cherry St Bridge Demolition		
Lakeshore Road & Rail Bridge Modifications		
Bridges and Structures		
River Valley System & Don Greenway		
Keating Channel Modifications		
Polson Slip North Side Naturalization		
Don Roadway Valley Wall Feature		
Eastern Avenue Flood Protection		
Flow Control Weirs		
Sediment and Debris Management Area		
Villiers Island Grading		
Flood Protection Features		
River Park North		
River Park South		
Promontory Park South		
Parks and Public Realm		
Cumulative		

Note: Flood Protection Features Program excludes East Harbour Flood Protection Landform project.

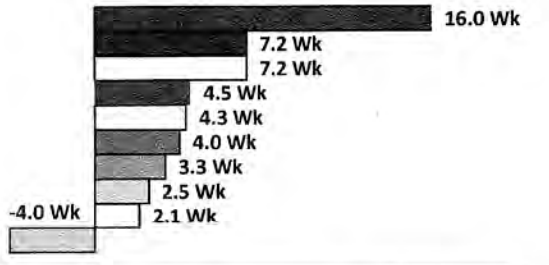
KEY RISKS & IMPACTS

Top Risks Impacting Project Cost (Based on Preliminary 30% Design)



- Gardiner Underpinning
- Deep Soil Mixing (DSM)
- External Market Forces in Excess of Cost Escalation
- TPLC Studio Temporary Accommodation
- Sediment Management Technology Alternatives
- Sediment Management Operations Equipment
- Risk Aggregate below Threshold
- Temporary Utility Relocation to Maintain Access
- Opp: Optimize Planting Soils
- Opp: Gardiner Ramp Demolition

Top Risks Impacting Project Schedule (Based on Preliminary 30% Design)



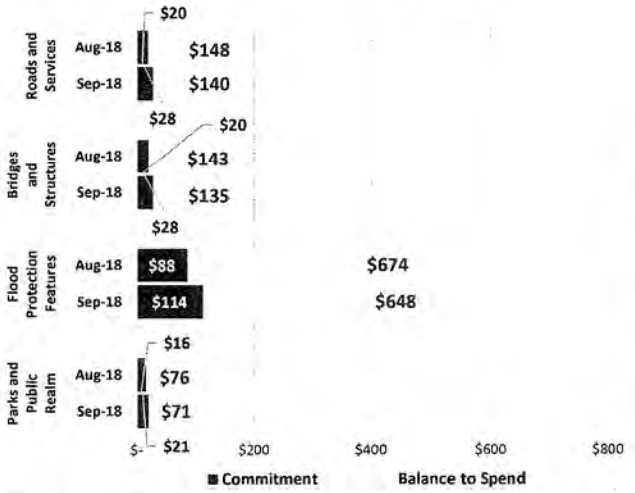
- Coordination with Non-Hydro Utilities
- Aggressive Design Schedule
- De-watering Effluent Discharge
- Sub-grade Excavation and Backfill at Polson Slip
- Health & Safety - Worker PPE
- Deep Soil Mixing (DSM)
- TTC Bridge Design Approval
- Substantial Failure to Establish Plantings
- Environmental Basis for Cherry St. Design
- Opp: Fisheries Timing Window Optimization

PLFP Monthly Program Dashboard - as of September 30th, 2018

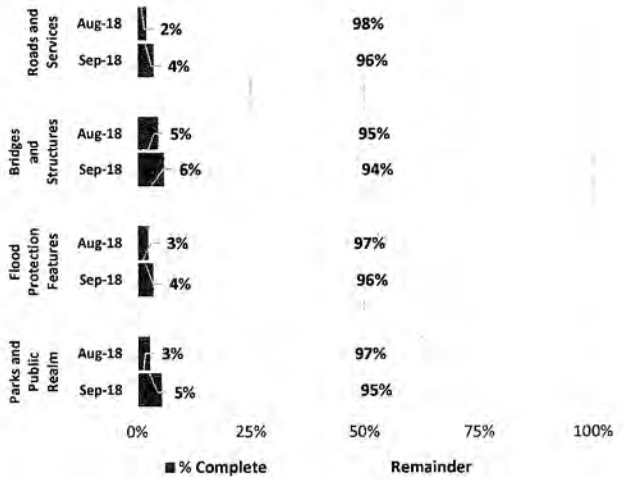
Issued: November 2nd, 2018

PROGRAM BUDGET STATUS

Commitments and Balance to Complete ($M)

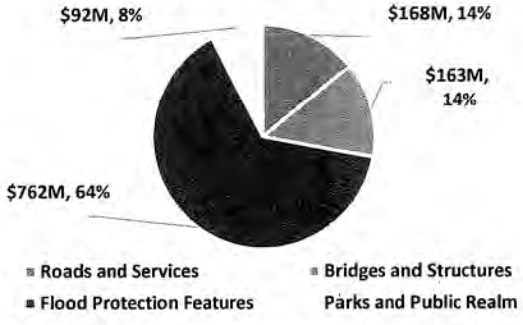


Program Progress - by Segment

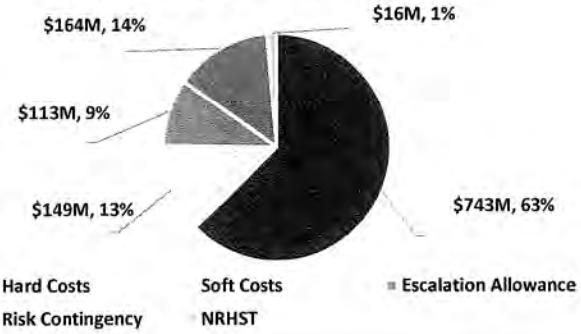


PROGRAM BUDGET ALLOCATION

Program Cost ($1.185B)



Program Cost by Cost Category ($1.185B)



FINANCIAL SUMMARY

Figures in Millions

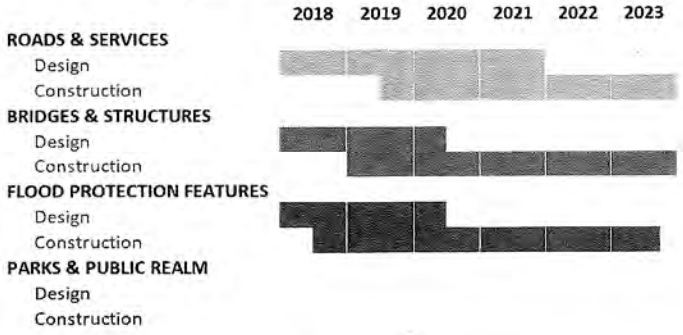
Segment	Project Name	Approved Budget	Total Commitments	Estimate to Complete	Estimate At Completion	Variance to Budget	Costs Incurred to Date	% Complete to Date
Roads and Services	Commissioners St. West to New Cherry St.	$ 18.00	$ 3.89	$ 14.11	$ 18.00	$ -	$ 0.65	3.63%
	Commissioners St. East to Saulter St.	7.00	1.11	5.89	7.00	-	0.28	3.95%
	Cherry Street Re-alignment (North & South of Keating)	22.00	7.05	14.95	22.00	-	1.99	9.04%
	Don Roadway North	7.00	1.88	5.12	7.00	-	0.46	6.52%
	Hydro One Integration	12.00	1.83	10.17	12.00	-	0.28	2.36%
	Site Wide Municipal Infrastructure	102.00	12.65	89.35	102.00	-	2.68	2.63%
Bridges and Structures	Cherry Keating-Cherry Street Bridge North	55.00	7.67	47.33	55.00	-	2.66	4.83%
	Cherry Polson-Cherry Street Bridge South	42.00	9.06	32.94	42.00	-	3.40	8.10%
	Commissioners Street Bridge/Don Roadway	43.00	7.68	35.32	43.00	-	2.49	5.80%
	Lakeshore Road & Rail Bridge Modifications	19.00	3.50	15.50	19.00	-	0.99	5.20%
	Old Cherry St. Bridge Demolition	4.00	0.49	3.51	4.00	-	0.13	3.19%
Flood Protection Features	River Valley System & Don Greenway	486.00	84.75	401.25	486.00	-	20.54	4.23%
	Keating Channel Modifications	35.00	3.04	31.96	35.00	-	0.76	2.16%
	Polson Slip North Side Naturalization	60.00	8.59	51.41	60.00	-	1.78	2.96%
	Don Roadway Valley Wall Feature	27.00	3.86	23.14	27.00	-	0.95	3.50%
	Eastern Avenue Flood Protection	5.00	0.63	4.37	5.00	-	0.17	3.40%
	East Harbour Flood Protection	5.00	-	5.00	5.00	-	0.00	0.00%
	Flow Control Weirs	38.00	3.25	34.75	38.00	-	0.67	1.77%
	Sediment and Debris Management Area	78.00	7.88	70.12	78.00	-	1.80	2.31%
	Villiers Island Grading	28.00	2.05	25.95	28.00	-	0.70	2.49%
Parks and Public Realm	River Park North	23.00	5.53	17.47	23.00	-	1.37	5.95%
	River Park South	27.00	5.72	21.28	27.00	-	1.37	5.07%
	Promontory Park South	42.00	9.52	32.48	42.00	-	2.22	5.29%
Cumulative		**$ 1,185.00**	**$ 191.66**	**$ 993.34**	**$ 1,185.00**	**$ -**	**$ 48.32**	**4.08%**

PLFP Monthly Program Dashboard - as of September 30th, 2018

Issued: November 2nd, 2018

PROGRAM SCHEDULE STATUS

Program Timeline - by Segment



Key Communications Milestones 2018-2019

Groundbreaking	December-18
Cherry Street Bridge North Begins	January-19
Public Meeting #3	March-19
Drop-In Centre Reopens	April-19
Excavation Begins	February-19
Commissioners Bridge Construction Start	August-19

PROGRAM PROGRESS - KEY TASKS

Key Tasks	September	October	November to January	February to April
	▪ To be Secured	▪ Delayed From Last Report		
Permits/Design Approvals to be Secured				
MOECP: Permit to Take Water (PTTW) - North of Keating Channel		√		
TRCA: Permit (Cherry St Bridge N)			√	
Transport Canada: Approval under Navigable Water Act - Bridges			√	
MOECP: Approval of Excess Soil Management Plan			√	
COT: Demolition Permit for Existing Buildings			√	
MOECP: Environmental Compliance Approval for Soil Treatment			√	
COT: Demolition Permit for Old Cherry St Bridge				√
Ports Toronto: Harbour Master Authorization for Cherry St N Bridge and Demolition				√
COT/ECS: Approval of 30% Roads Design		√		
COT: Approval of 30% Bridges Design			√	
Toronto Hydro: Approval of Street Lighting on Bridges			√	
TRCA: Approval of Flood Model			√	
TTC: Approval of Bridges Design				√
Contracts to be Secured				
River Valley Area Laboratory and Testing			√	
Don Greenway, Cherry St. North and Promontory Park: Pre Construction Surveys			√	
Cherry St. Bridge North - Deep Foundation			√	
Bridge Steel Structure Fabrication & Erection			√	
River Valley System Soil Mixing and Sheeting Piling & Dock Wall			√	
Cherry St North Construction			√	
Promontory Parks Earthworks			√	
Parks Playgrounds Design and Fabrication			√	
Cherry St Soil Improvement				√
Sitewide Excavation & Soil Management				√
River Valley Planting Soil				√
Bridges: Substructure & Finishes				√
Design Phase Status				
Cherry St. Realignment		60% Design	100% Design	
Lakeshore Bridge & Rail Modifications		Concept Design		30% Design
Bridges: North, South, Demo, Commissioners		60% Design	90% Design	100% Design
Sitewide Municipal Infrastructure			30% Design	
River Valley System & Don Greenway			D&SP 100% Design	DSM & Exc. 100% Design
Polson Slip Naturalization			D&SP 100% Design	DSM & Exc. 100% Design
Don Roadway Valley Wall Feature			D&SP 100% Design	
Parks: Promontory South and River North			D&SP 100% Design	Rough Grading 100% Design
River Park South			D&SP 100% Design	
Hydro One Integration			Concept Design	
30% Update Component Budget to be Confirmed			√	
Construction Completion				
River Valley System: East & West Cell - Demolition & Site Preparation		√		
River Valley System: Mobilization of Soil Mixing Rigs				√

D&SP = Demolition & Site Preparation, DSM = Deep Soil Mixing, Exc. = Excavation

SITE PHOTOS

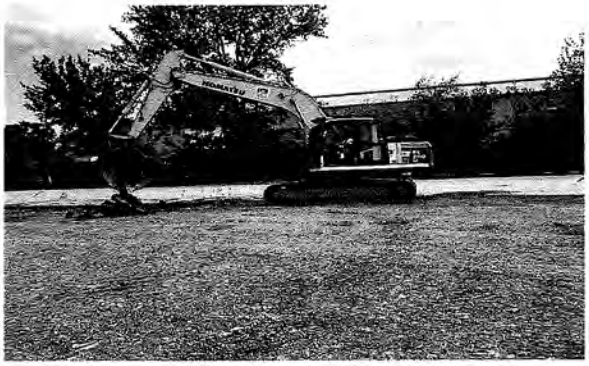


Figure 1
Stripping concrete around rails



Figure 2
Rail removal



Figure 3
Asphalt stripping at south end of 51 Commissioners St



Figure 4
Beginning of rail collection



Figure 5
Rail cutting



Figure 6
GHD drilling borehole along Commissioners St

Quarterly Portfolio Dashboard - as of September 30th, 2018

Issued: November 2nd, 2018

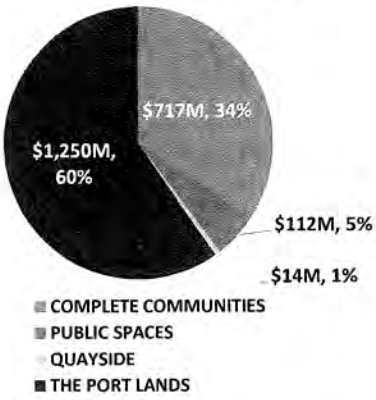
PROGRAM STATUS

OVERALL STATUS | BUDGET STATUS | SCHEDULE STATUS

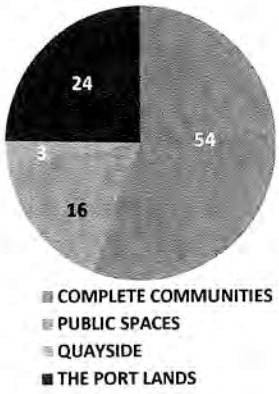
Q2 2018-2019 Update: Waterfront Toronto is currently tracking to deliver all of its projects on budget and is in compliance with its contractual obligations. Schedule risks are being closely monitored to ensure timely project delivery.

PROGRAM SUMMARY

Approved Investments by Priority Initiative ($2.1B)



Number of Projects by Priority Initiative (97 projects)

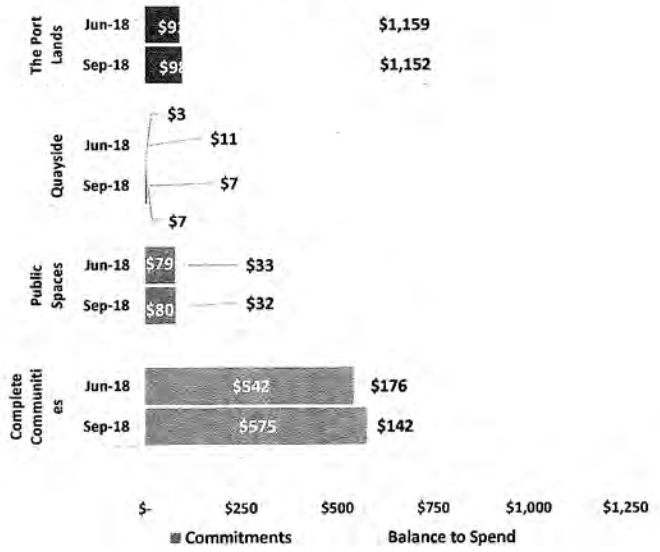


Expected Project Duration

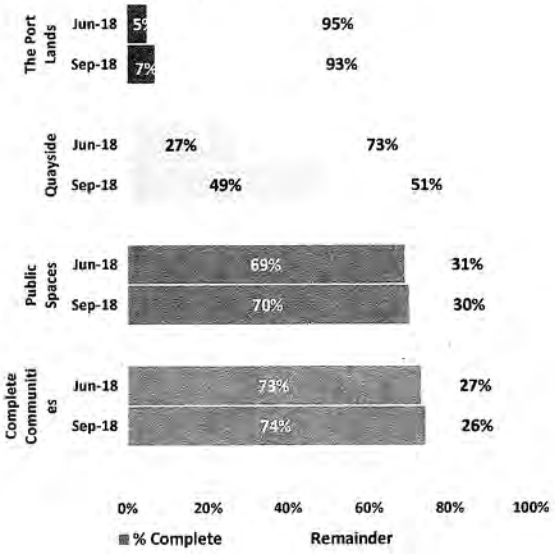
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
THE PORT LANDS											
COMPLETE COMMUNITIES											
PUBLIC SPACES											
QUAYSIDE											

PROGRAM IMPLEMENTATION INDICATORS

Commitments and Balance to Spend ($M)



Project Completion

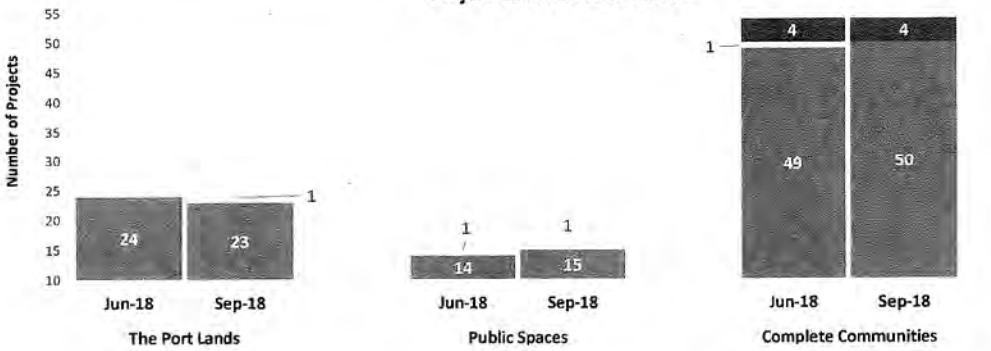


Quarterly Portfolio Dashboard - as of September 30th, 2018

Issued: November 2nd, 2018

PROGRAM RISK STATUS

Project Schedule Risk Status



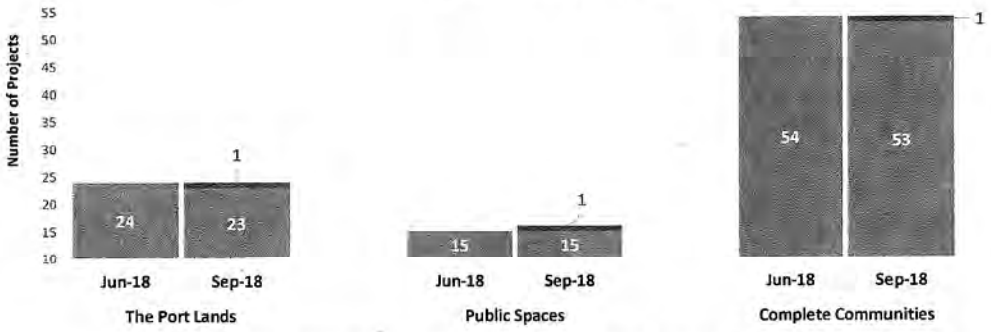
- Low Risk -On Schedule/0-1 months behind schedule
  Medium Risk -1-6 months behind schedule
- High Risk -6+ months behind schedule

Projects on High Risk (4):

1. Stormwater Management Facility
2. Aitken Place Park
3. East Bayfront Local Streets
4. Queens Quay East and Parliament Intersection

Note: The Bentway – 800 Fleet Street and Garrison Road was added to the portfolio since the June 30th update.

Project Budget Risk Status



- Low Risk -Forecast to complete within approved budget
  Medium Risk -Forecast to complete within 10% of approved budget
- High Risk -Forecast to complete more than 10% over approved budget

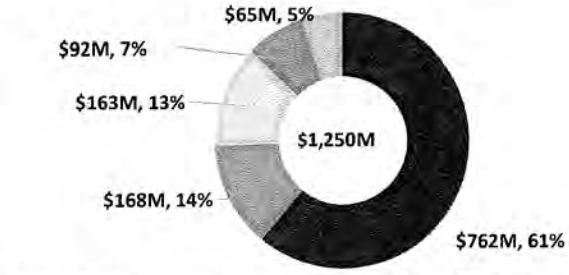
Projects on High Risk (3)

1. Lakeshore Road & Rail Bridge Modifications (No impact on overall project budget)
2. Rees Street Park Design Competition
3. Dockside Block 1 Dockwall Reinforcing

Note: Quayside project status update is included as part of Quayside Dashboard

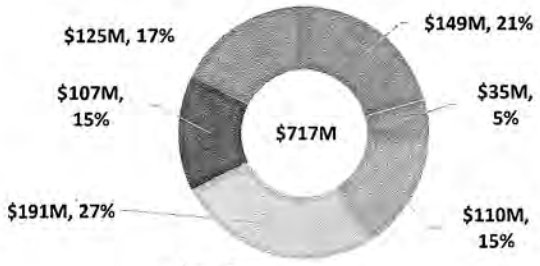
INVESTMENT BY PRIORITY INITIATIVE

Approved Investment Plan for the Port Lands ($M)



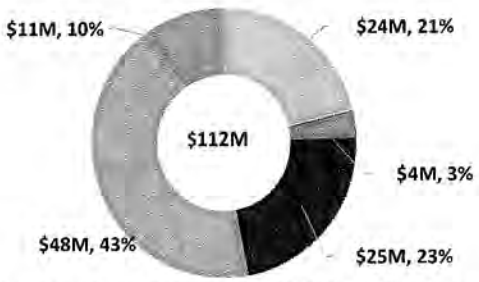
- Flood Protection Landform
- Bridges
- Cherry Street Lakefilling Project
- Roads and Civil Work
- Parks and Public Realm

Approved Investment Plan for Complete Communities ($M)



- Bayside
- Dockside
- Other
- Queens Quay
- West Don Lands Development
- Storm Water and Sanitary Sewer Infrastructure

Approved Investment Plan for Public Spaces ($M)



- Public Art
- Jack Layton Ferry Terminal
- The Bentway
- Other
- York and Rees Street Park

Note: Quayside project status update is included as part of Quayside Dashboard

Pages 1144-1150
are withheld
pursuant to paragraph
20(1)(b)
of the *Access to Information Act*

****

Les pages 1144-1150
font l'objet d'une exception totale
conformément à la disposition de paragraphe
20(1)(b)
de la loi sur l'accès à l'information

ATIA - 19(1)

Pichette, Chanelle (INFC)

From: Mary Anne Santos [redacted]@waterfrontoronto.ca>
Sent: December 21, 2018 3:17 PM
To: Mike Yu; Brett Howell; Whitehead, Cam (MOI); James, Andre (MOI); Soler, Roger (INFC); MacFarlane, Shainah (INFC); Coffin, Erin (INFC); Nassif, Marie-Pier (INFC)
Cc: Lisa Taylor; David Kusturin; Meg Davis; Sampada Chandane; Erik Cunnington; Adhish Risbud; Julius Gombos; Alma Pjetra
Subject: Board-Approved Long Term Plan for Strategic Plan/2019-20 Corporate Plan
Attachments: 2018 LTP FINAL (Dec 6 2018) v10 - WT Stakeholders.xlsb

Hi to all,

Please find attached **this year's Long Term Plan (LTP) for Waterfront Toronto's Priority Projects**, which is **covered in the Strategic Plan/2019-20 Corporate Plan approved by the Board in December 2018**. Attached LTP document reflects **total WT investments of $1.3B for our Priority Projects (excluding $0.2M for our New Potential Projects) over the next five years (2019/20 to 2024/25)**, with the following key updates during this five-year period (relative to the LTP figures discussed in early November 2018):

- Updated Port Lands funding schedule to reflect timing adjustments to the Provincial and City funding schedule (timing adjustment as communicated to the City and Province earlier, no change in overall project budget)
- Additional investments/new scope for the following projects:
    - York & Rees Street expanded project construction scope (additional $14M)
    - New scope for The Bentway covering the Pedestrian and Cycling Bridge ($9M)
- Allocation of overhead costs to the different projects in line with full project costing (as communicated in November 2018)
- Updated Quayside project estimates (additional $4M costs for the project's Master Innovation & Development Plan phase due to increased staffing and required due diligence scope)

Apologies for the delay in sending this file as we had some issues with this document (file got corrupted).

Please let us know if you have any questions. Happy Holidays to all!

Thanks.

Mary Anne

Pages 1152-1158
are withheld
pursuant to paragraph
20(1)(b)
of the *Access to Information Act*

****

Les pages 1152-1158
font l'objet d'une exception totale
conformément à la disposition de paragraphe
20(1)(b)
de la loi sur l'accès à l'information